

**Univerzita Karlova v Praze  
1. lékařská fakulta**

Studijní program: Specializace ve zdravotnictví

Studijní obor: Adiktologie



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Health and Social Risks of Cannabis Use Among Spanish Cannabis  
Social Club Members

Zdravotní a sociální rizika užívání konopí mezi členy španělských  
sociálních klubů

**Diplomová práce**

Vedoucí závěrečné práce: Ing. Mgr. Vendula Běláčková, Ph.D.

Praha  
2015

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Poděkování:

Na tomto místě bych ráda poděkovala Mgr. Ing. Vendule Běláčkové, Ph.D. za poskytnutí zajímavého tématu, odborné rady a trpělivé vedení. Obrovský dík také patří Davidovi nejen za jazykovou korekturu, ale i za lidskou podporu během psaní práce.

## **Bibliografický záznam**

TOMKOVÁ, Alexandra. Health and Social Risks of Cannabis Use Among Spanish Cannabis Social Club Members. Praha, 2015. 80 s. Univerzita Karlova v Praze, 1. lékařská fakulta, Klinika adiktologie 1. LF UK 2015. Vedoucí diplomové práce Ing. Mgr. Vendula Běláčková, Ph.D.

### **Abstract:**

Cannabis social clubs (CSCs) in Spain are non-profit organizations that associate cannabis users. According to the Spanish criminal law drug consumption itself, as well as possession of a drug, is not considered a crime but rather an administrative offence. Yet, social club activities could possibly lower the health risk of cannabis among its users, mainly because they are avoiding the black market and they can control the drug quality as well as the amount of drug intake relating to the fixed consumption limit (Barriuso, 2005; Barriuso, 2011).

The aim of the research conducted for this thesis was to reveal how Spanish CSCs function on daily basis from their members' perspective and how the cannabis cultivation and distribution is carried out. Although this is an explorative research, in addition it could indicate the possible weaknesses and strengths of this model as well as possible risks and benefits for its members.

The open explorative qualitative study design was used. For data gathering qualitative data was chosen in a semi-structured focus group method (Miovský, 2006; Morgan 2001).

One of the important joint activities of the social club members is cultivation of cannabis plants and sparing of the harvest just for their own consumption. As such, it's members can avoid the black market and its risks. The study should reveal potential harm reduction impact of CSC activities.

Key words: Cannabis – CSC – Spain – shared cultivation – Cannabis Social Club

## Abstrakt:

Španělské konopné sociální kluby (Cannabis Social Clubs, CSCs) jsou neziskové organizace, ve kterých se sdružují uživatelé konopí. Podle španělského trestního zákona není držení drogy stejně jako samotná konzumace drogy trestným činem, ale pouze přestupkem. Konopné kluby mohou mít dopad na snížení rizik spojených s užíváním konopí a to především proto, že umožňují svým členům vyhnout se nákupu drogy na černém trhu, mají určité mechanismy kontroly kvality a také pomáhají uživatelům konopí k zodpovědnému užívání pomocí předem stanovených limitů spotřeby (Barriuso, 2005; Barriuso, 2011).

Cílem tohoto výzkumu je popsat jak španělské CSCs fungují na denní bázi z pohledu jejich členů a jak je organizováno společné pěstování konopí a jeho následná distribuce mezi členy. Ačkoliv se jedná o otevřenou studii, její výsledky mohou naznačit možnosti a meze tohoto modelu a také popsat z něj plynoucí výhody a rizika pro členy těchto klubů.

Pro tyto účely byla použita metoda otevřené kvalitativní studie. Kvalitativní data byla sbírána pomocí polostrukturovaných ohniskových skupin (Miovský, 2006; Morgan 2001).

Jednou z důležitých aktivit členů CSCs je společné pěstování konopí a jeho následná distribuce mezi členy pro jejich vlastní spotřebu. Tímto se mohou členové těchto klubů vyhnout rizikům vyplývajícím z černého trhu. Studie by také měla naznačit případný vliv CSCs na snižování rizik spojených s užíváním konopí.

Klíčová slova: Konopí - CSC - Španělsko - společné pěstování - Konopný sociální klub

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## Introduction

Cannabis social clubs (CSCs) in Spain are non-profit organizations that associate cannabis users. One of the important joint activities of the social club members is cultivation of cannabis plants and sparing of the harvest just for their own consumption. As such, it's members can avoid the black market and its risks. Besides recreational users, CSCs also supply people who use cannabis for medicinal purposes. One of the aims of the collective cultivation is to provide high quality cannabis to CSC's members (Room et al., 2008; Barriuso, 2005; 2011).

CSC's are currently using the grey area of Spanish legislation. According to Spanish criminal law, consumption itself, as well as possession of a drug, is not considered a crime but rather an administrative offence. However, it only applies to private places as it is regulated by the Organic Law 1/1992 Protection of citizens (Ley Orgánica 1/1992, sobre Protección de la Seguridad Ciudadana, 1992). After The Supreme Court's decision of determining that any (even shared) cultivation for personal use is not considered a crime if no trafficking is intended, CSC's started to expand all over Spain. Currently there are approximately 400 CSCs in Spain, with the majority in Catalanian and the Basque region (Decorte, 2014a; Barriuso, 2011).

Although ARSEC (*Asociación Ramón Santos de Estudios Sobre el Cannabis*) was interested in the possibility of collective cultivation as early as 1993, the first Cannabis social clubs appeared in 2002. By 2011 there were between 100 and 300 associations all over Spain, but mostly in Catalonia and Basque country. Their current existence is not legally treated in most municipalities.

In 2003 Federación de Asociaciones Cannábicas (FAC), comprising of 21 clubs, was established. At the moment, FAC associates CSCs all over Spain from 15 regions: Andalucía, Extremadura, Galicia, Madrid, Asturias, Baleares, Murcia, Canarias, Cantabria, País Vasco, Castilla la Mancha, Castilla y León, Valencia y Castellón, Catalunya, Zaragoza – 65 members, including La Federación de Asociaciones de Cannabis de Cataluña (CatFAC), which covers 27 catalunian CSCs itself. Besides FAC's aim to change the Spanish marijuana legislation, their goal is also to set the basic frame of CSCs' rules and conditions so they can be regulated. FAC is also part of the European Coalition for Just and Effective Drug

Policies (ENCOD), and so plays an important role in international discussion, as well (FAC, 2010; FAC 2014).

Social club activities could possibly lower the health risk of cannabis among its users, mainly because they avoid the black market and they can control the drug quality as well as the amount of drug intake relating to the fixed consumption limit (Barriuso, 2005; Barriuso, 2011). In addition to the cultivation itself, Cannabis social clubs also operate in the area of marijuana legalisation advocacy. As a means of activism, Cannabis social clubs perform similar tasks on the national level as do other advocacy groups on the national or international level (Gutiérrez, 2008).

The aim of the research conducted for this thesis was to reveal how Spanish CSCs function on a daily basis from the members' perspective, its rules, how the cannabis cultivation and distribution is carried out and the harm reduction impact of CSCs' activities. The purpose is also to describe the CSCs' membership criteria. Although this is an explorative research, it could indicate the possible risks and benefits for its members, as well as the pros and cons of this model.

## **1. Background**

### **1.1. Cannabis in General**

#### **1.1.1. History of Cannabis**

Cannabis originally comes from Central Asia and is now globally spread, mainly because of its high environmental adaptivity. Cannabis has been cultivated for the great fiber quality and also for oil production. It was spread from Central Asia to China. The first evidence of cultivation is about 10,000 BC from Taiwan, where ceramics decorated with hemp string were found. Around the year 6000 BC cannabis seeds were used as food in China. Clothing made from hemp appeared around 4000 BC. In 4700 BC the first information about cannabis use as a medicine was published. Around 1500 BC Cannabis was cultivated purposely for food and fiber.

According to legend, eunuch Cchaj-Lun was randomly trying to mix the ground mixture of hemp and mulberry bark porridge, and then he dried it in a special form. This led to discovering waterproof high-quality paper. Besides the Cchaj-Lun story, the paper containing hemp fiber was also found in tombs in the province Shaanxi of the first century AD.

Cannabis was one of the sacred plants in India, highly used as anxiolytic medicine. The first mention of this is dated between the years 2000 and 1400 BC.

Assyrians frequently used cannabis as medicine according to clay tablets from the year 650 BC. Although the first findings reveal the presence of cannabis in Europe from 3000 BC, the first written mention of it is from the 5th century BC when Greek philosopher and historian Herodotus of Halicarnassus described the cannabis characteristics. Throughout history, Cannabis was used mostly for ritual purposes, medicine, fibre production, and also for recreational use (Miovský, Gabrhelík, Vacek, Hanuš in Miovský et al., 2008).

### 1.1.2. Botany

Cannabis belongs to the family of cannabaceae and is distinguished by three species: *Cannabis sativa* L., *Cannabis indica* L., *Cannabis ruderalis*. Cannabis is an annual plant that is grown almost exclusively from seeds. It has a characteristic shape of palm, sharply serrated leaves. The herb reaches different heights, typically around three meters or even more. The root system is poorly developed. The stem is straight, with glabrous or hairy leaves and long petioles, with palmate venation. They consist of several blades. Arrangement of the leaves are either opposite or alternate. The plant is a dioecious, ie. that are distinguished male and female plants. The flowers are stored in direct inflorescence, located near the glandular trichomes that produce intoxicating resin. Hemp is simple, durable. Vegetative period is about three to five months (Gabrielová & Ruman in Miovský et al, 2008).

*Cannabis ruderalis* is dioecious, rarely monoecious herb with richly branched, about 0.5-1 high and slightly grooved stems. It is a weed species without significant narcotic effects. Its homeland is southeastern Russia, Small and Central Asia.

*Cannabis sativa* L. (further only *sativa*) is the most abundant kind of cannabis which includes two subspecies: *Cannabis sativa* ssp. *Spontanea* and *Cannabis sativa* spp. *Culta*. *Sativa* is an annual dioecious plant with possible male or female inflorescence. *Sativa* grow in areas close to the equator, for example Colombia, Mexico, Thailand and Southeast Asia. Because of its adaptivity it spreads in temperate climatic zones as well. *Sativa* has higher THC:CBD ratio than *indica* which means it has a stronger stimulatory effect.

*Cannabis Indica* L. usually grows in tropical zones (e.g. Afghanistan, India, Iran, etc.), densely branches out, and reaches a height of 1.5m. *Indica* strain have a higher CBD:THC ratio and so has more sedative effect, so called being “couch lock” (Gabrielová & Ruman in Miovský et al, 2008; Ruman & Klvaňová, 2008; Freedom Seeds, 2014). However, today most of the products are hybrids between these two phenotypes and so we rather talk about *Indica*-dominant or *Sativa*-dominant strains. So far around 700 strains is known to exist (Erkelens & Hazekamp, 2014).

Cannabis occurs in two basic forms - marijuana and hashish. Sometimes hashish oil is made from cannabis as well. Marijuana is the name for the flowering

and upper leaves of hemp, Hashish (also “chocolate”) is cannabis resin containing mostly small content inflorescences and small debris (Miovský in Kalina, 2003).

### **1.1.3. Phytocannabinoids and Endocannabinoid system**

The active substance from cannabis, cannabiol, was identified as early as the 19th century by Wood and his colleagues (Wood, Spivey & Easterfield, 1899). Delta-9-tetrahydrocannabinol (THC) was found decades after further investigation and described in the year 1964 (Fišar, 2008). It is the main psychoactive substance in cannabis responsible for its psychoactive effects. Another important, but not psychoactive substance, is cannabidiol (CBD) which has sedative, analgetic and antibacterial effects. CBD also counteracts the effects of THC (Bečková & Višňovský, 1999). Many other active substances from cannabis were identified later, such as: Tetrahydrocannabinolic acid (THCA),  $\Delta^8$  - tetrahydrocannabinol (delta-8-THC), Cannabidiolic acid (CBDA), Tetrahydrocannabivarin (THV), Cannabigerolic acid (CBGA), Cannabigerol (CBG), Cannabinolic acid (CBNA), Cannabinol (CBN), Cannabichromenic acid (CBCA), Cannabichromene (CBC), Cannabicyclolic acid (CBLA), Cannabicyclol (CBL). So far at least 60 cannabinoids were identified. Besides cannabinoids, cannabis also contains 120 terpenoids, 50 hydrocarbons, 34 sugars and related compounds, 27 nitrogenous compounds, 25 non-cannabinoid phenols and other substances (Grotenhermen, 2004; Mechoulam & Hanuš, 2000).

Delta-9-trans-tetrahydrocannabinol (THC) is the main psychoactive compound in cannabis. Approximately 75- 100% effects are caused by this substance. Drugs made from highly potent strains, carefully prepared, can contain up to 12% THC in the dry product. To be considered a sufficiently effective psychoactive plant, it must contain at least 1% of THC.

THC is a highly soluble in lipids and is therefore easily absorbed with pulmonary epithelium. The absorption of THC, when used orally, is slower and quite variable. The biological decay of THC is approximately 14 to 48 hours. Because of lipid solubility, metabolites can accumulate in the body's fat tissues and be excreted even a week after use. 70% of THC dose is excreted in 72 hours after use (40% in faeces and 30% in urine) the rest is stored in fat tissue.

Delta-8-trans-tetrahydrocannabinol is similar to THC, but doesn't have such strong psychoactive effects. It is usually present in cannabis in very small quantities and is therefore usually distinguished between that and all effects attributed to THC.

Cannabidiol (CBD) is contained in cannabis in different quantities, ranging from 0% to 95% from all cannabinoids. However, as mentioned before, it has sedative effects. Interferes with the activity of the drug, moves onset and can doubly prolong its effect. CBD is the intermediate stage in the formation of THC biosynthesis in plant cells. Therefore, it can affect the amount of THC in the plant environment through changes in the cultivation or artificial intervention in the processing of finished production harvested. Proper timing of the harvest can support isomerization (the process when CBD has already formed in the plant and transforms into THC) and increases the THC content in the plant (Bečková & Višňovský, 1999; Dupal, 1994).

Cannabinol (CBN) occurs by oxidation of THC, arising during THC degradation. CBN is not synthesized in plants, but its presence in the plant is caused by unsuitable storage, drying process or poor preparation, where part of the THC oxidizes. Products with content of CBN can lead to dizziness, tiredness and somnolence.

Cannabinoids exist naturally in human body. During the experiments of cannabinoids effects two types of specific cannabinoid receptors were found: CB1 and CB2. While CB1 is mostly in central nervous system (hippocampus, cerebellum, substantia nigra and in the dopamine system), CB2 is localized in peripheral parts such as spleen or some cells of immune system. The discovery of the cannabinoid receptors in human body led to the search for endocannabinoids - produced by human body itself. Anandamide was identified as endogenic ligand for CB1 receptor and 2-arachidonoylglycerol (2-AG) for CB2 receptor (Mechoulam, Hanuš, 2000; Bečková & Višňovský, 1999).

## 1.2. Legislation

### 1.2.1. International Legislation

Based on the global need of drug production and trafficking control, the United Nations organized Conference in New York where Single Convention on Narcotic and Drugs (1961) was released in participation with representatives from 73 countries. The aim of the convention was to unite extant multilateral conventions and base the foundation of current drug policy in the world. Cannabis was added among other highly addictive and most harmful drugs in Schedule I. as well as into Schedule IV, where the substances with little or no medical value, but potentially very dangerous, were listed (Bewly-Taylor, Blickman & Jelsma, 2014). The Single Convention was amended by the Protocol from the year 1972. This extended version more clearly specified some terms, among other defines cannabis (UNODC, 2013):

*„(b) “Cannabis” means the flowering or fruiting tops of the cannabis plant (excluding the seeds and leaves when not accompanied by the tops) from which the resin has not been extracted, by whatever name they may be designated.*

*.....*

*„2. For the purposes of this Convention a drug shall be regarded as “consumed” when it has been supplied to any person or enterprise for retail distribution, medical use or scientific research; and “consumption” shall be construed accordingly“*

(UNODC, 2013, p. 24-25)

Penal provision due to the Single Convention, in its Article 36, at §1 (a):

*“Subject to its constitutional limitations each Party shall adopt such measures as will ensure that cultivation, production, manufacture, extraction, preparation, possession, offering, distribution, purchase, sale, delivery, brokerage, dispatch, transport, importation and exportation of drugs contrary to the provisions of the*

*Convention shall be punishable offences when committed intentionally, and that serious offences shall be liable to adequate punishment particularly by imprisonment or other penalties of deprivation of liberty”.*

(UNODC, 1972, p. 18)

The violation of the Convention is considered an offence and so it should be punished (Kilmer et al., 2013).

In the year 1971, the UN adopted another convention focusing on the drug problem: Convention on Psychotropic Substances of 1971. The conference, where content of the convention was agreed, took part in Vienna in February 1971. Seventeen years later, Conventions against Illicit Traffic in Narcotic Drugs and Psychotropic Substances were accepted. The last convention mentions to establish an offence under the domestic law for each Party, nevertheless, for personal possession / use, it needs not to be criminal (UNODC, 2013; Kilmer et al., 2013). Despite the UN conventions don't distinguish between cultivation and cultivation for personal use, an implication could be made that cultivation for personal use could indeed be punished non-criminally (Bewlay-Taylor, Blickman & Jelsma, 2014).

### **1.2.2. Spanish Legislation**

The United Nations' Single Convention on Narcotic drugs was signed in the year 1966 by Spain. Thereupon the Law 17/1967 was created. Under this act possession of illicit substances for medical or scientific use was legal. Spain is a Party of United Nation's international conventions. According to Spanish legislation, cannabis is a psychoactive drug and so it's cultivation, trafficking, and production is considered as a punishable offence. It is also on the list of plants with harmful potential (B. O. E. núm. 32, 2004).

Spanish criminal code dedicate to drug offences issue from article no. 368 to article no. 378 which came into force on 25<sup>th</sup> May 1996 (Herrero, 2010; B. O. E., 1995). The code is formulated in “open” way, where everything is not particularly



expressed so there is certain flexibility for judges. Spanish court judicial decision play important role in future cases' approach. Spanish court decisions of the field of drug delicts are based on the Spanish criminal law distinguishing between "soft" and hard "drugs" in terms of their possible negative impact on public health as well as seeing drug user rather as a sick person not as a criminal (Navarrete-Varo, 2014). Cannabis is always classified by the Supreme Court like a drug which does not cause serious damage to health (Herrero, 2011).

The article 368 of Criminal Law describes the crime of drug trafficking:

*"Those who carry out acts of cultivation, processing or trafficking, or otherwise promote, encourage or facilitate the illicit use of drugs, narcotics or psychotropic substances, or possess with those purposes, shall be punished with imprisonment from three to nine years and a fine of three times the value of the object drug offense if the case of substances or products causing serious harm to health, and imprisonment of one to three years and a fine of up to double in the other cases."* (B. O. E., 1995)

Punishment for illegal cannabis production and trafficking ranges between 1 to 3 years of imprisonment depending on the seriousness of the case. If the perpetrator doesn't have a previous criminal record, the sentence is usually suspended for two years. However, in the case of a second violation, the two punishments are added together (Barriuso, 2011).

As it was mentioned above, consumption and possession, if only for personal use, is not regarded as a criminal offence. Although it is not explicitly mentioned in Spanish criminal law, it is based on Court Rulings (STS de 12 de diciembre de 1990 y 17 de enero 1994) which decided that if it is intended only for personal use then it is not a punishable offence (Navarrete-Varo, 2014; Herrero, 2000). However, it only applies to private places as it is regulated by the Organic Law 1/1992 Protection of citizens. (Ley Orgánica 1/1992, sobre Protección de la Seguridad Ciudadana, 1992). The quantity of cannabis which is still regarded as for personal use is determined by Public Prosecutor guidelines. Nevertheless, there is no Public prosecutor guidelines for the case of cultivation. Decisions in cases of cultivation for

personal use depend on police, judge and region where the case takes place. This unclear approach creates certain insecurity, and cases of cultivation quite often end up closed (Barriuso, 2011).

The Organic Law 1/1992 of 21 February, of The Protection of Public Safety prohibits the possession or consumption of any amount of illegal drugs in public places and makes such infractions punishable by fines, seizures and other possible measures. The text reads:

*“Article 25*

*The consumption, as well as the illegal possession, in general areas such as streets, public facilities and transport, constitute as serious public infractions, of drugs not intended for trafficking, narcotics or psychotropic substances, provided they do not constitute a criminal offense and neglect the use and instruments used for consumption in these sites.*

*2. The penalties for these offenses may be suspended if the offender undergoes treatment for addiction in a facility or service duly accredited in the manner and for the time determined by regulation.*

*Article 28*

*1. The offenses referred to in Article 25 may be further punishable with suspension from driving motor vehicles for up to three months and with the withdrawal of the permit or firearms license, proceeding at once to the seizure of toxic drugs, narcotic drugs or psychotropic substances. The Public Safety Act does not apply within local associations, as they are private places, but anyone who leaves the premises with hashish or marijuana would be violating this rule, with economic sanctions ranging from 300 to € 6,000. In the case of transport of material to the association, if it is intercepted by the police, it is logical to expect that they seize a risk worth taking into account when planning the logistics.”*

(Ley Orgánica, 1999)

Since the clubs spread around the Spain there is an emerging need to regulate them. So far two cities and one autonomous community accepted the local regulation of CSCs: The province of Girona, municipality of San Sebastian and Navarra. Others would like to do that in the near future (Basque country, Barcelona and The Parliament of Catalonia) (Marks, 2015).

### **1.3. Cannabis Use and Related Risks**

#### **1.3.1. Harm Reduction and Public Health**

“Harm reduction encompasses interventions, programmes and policies that seek to reduce the health, social and economic harms of drug use to individuals, communities and societies.”

(Rhodes & Hedrich, 2010, p. 19).

Harm reduction interventions are build on public health principles and also adapted to needs of particular community. The idea of harm reduction is pragmatic and it is not necessarily aiming to abstinence, but rather to prevent the harms caused by the drug use. Purpose of tertiary prevention, as is the HR also called, is to minimize the damage caused by drug use, accepting the fact that drug use is a globally existing problem and any change towards the less risky behaviour is seen as a positive step. Harm reduction was created as reaction to the HIV/AIDS outbreak in the 80's when intravenous users, among others, were identified as one of the vulnerable groups. Therefore, first needle exchange programmes were adopted to prevent the spread of the infection. Harm reduction interventions are not only services providing material but also and mainly is counselling, providing information about safer drug use, safe sex etc. to prevent users from facing the risky behaviour. Although we mainly use the term harm reduction related to injection drug use later, this pragmatic approach broadens its scope nowadays and is used for alcohol use (e.g. Marlatt & Witkiewitz, 2002) as well as for smoking cannabis (Hall & Fischer in Rhodes, 2010). Besides the fact that harm reduction is trying to lower and stabilize the negative side-effects of drug use among individuals, those who use mostly illicit

drugs also protect general society applying the public health principle on political and local levels. (Hrdina in Kalina et al., 2003)

### **1.3.2. Risks Related to Cannabis Use**

Wayne Hall and Benedikt Fischer (In Rhodes, 2010) dedicated their chapter in Harm reduction: Evidence, impacts and challenges to review of harm reduction for cannabis use and possible harm reducing strategies. Mainly mentioned potential negative implications resulting from the cannabis use are: mental health, car crash, respiratory risk and dependence. Roffman and Stephens (2011) described the cannabis use risks and its minimization. Besides the health risks they named the impact of cannabis illicit market. Mainly they mentioned the high cost of the law enforcement, which includes financial cost connected to application of police and judicial services.

#### **1.3.2.1. Cannabis and Mental Health**

Perhaps one of the most currently discussed topics stemming from cannabis use is the risks among youths. Scientists worldwide are interested in a relationship between cannabis use and mental, not just for the purpose of hypothetical legalization. A few studies were dedicated to study the link between cannabis use, particularly in adolescence, and schizophrenia. Andreásson et al. (1987) revealed results from the longitudinal study of Swedish conscripts from years 1969 and 1970 focused on cannabis and schizophrenia in an article published in The Lancet. The 15-year follow-up study showed that the more intensive use of cannabis in adolescence increases the risk of schizophrenia. However Andreasson and his colleagues pointed out that it does not have to be inevitably causality, but the contrary emerging schizophrenia could increase the use of cannabis. This fact is disproved by work of Breakey et al. (1974) who conducted research on premorbid personalities of hallucinogenic drug users and non-users and their results support

the hypothesis of direct relationship between hallucinogenic drug use and later psychotic disease. Another follow up cohort study exploring the effect of marijuana on mental health was published in the year 2002. Zammit et al. (2002) extended the previous Swedish longitudinal study. 362 individuals from the 50 053 conscripts who were involved in the study were diagnosed as schizophrenics by the year 1996. Concretely: heavy cannabis users were 6.7 times more likely to be later diagnosed as schizophrenic than non-users. The study revealed that using cannabis in adolescence increases the risk of subsequent development of schizophrenia, with relationship to the frequency. Pointing out that possibility of developing schizophrenia depends on different variables and cannabis use could interfere with one of the unknown risk factors. Several studies supported these findings (van Os et al. 2002; Arseneault et al., 2002; or Fergusson, Horwood & Swain-Campbell, 2003; Degenhardt and Hall, 2006; Moore et al., 2007).

Slightly different results were brought about by an article published in 2014 by Schizophrenia Research. Proal et al. (2014) divided probands into four groups, comparing in the first group those who did not use cannabis, and in the second group those who had used it and were not diagnosed with schizophrenia, the third group included probands suffering from schizophrenia with no history of cannabis use, and in the fourth group those who experienced use of cannabis and were diagnosed as schizophrenics. The aim of this study was to explore the role of the familial risk for schizophrenia and identify if the direct link between cannabis use and psychotic disease is not overrated. Results showed it is rather familial risk than cannabis use itself that causes the future attack of the disease. However, it was not the intention of this paper to determine whether those from the fourth sample group would show any symptoms if no cannabis use existed. However, there is another longitudinal study comparing individuals in a high familial risk of schizophrenia and using cannabis with those who aren't using it.

Having a deeper look at the issue of cannabis use and potential subsequent development of psychotic disease requires an understanding of the chemical content of cannabis that is mentioned in the chapter Cannabis in General. CBD and THC content and their ratio represent the major issue. D'Souza et al. (2004) examined the capacity of THC to provoke psychosis-like effects in healthy individuals. He conducted a double-blind study with 22 volunteers. Placebo, 2.5 mg and 5 mg of intravenous dose of D-9-THC were administered to identify the

psychomimetic effect of THC. Results confirmed both positive and negative psychomimetic effects in cases of THC compared to a placebo. The peak was reached after 10 minutes IV administration of 2.5 mg and 80 minutes after IV administration of 5 mg of THC. On the other CBD, another cannabinoid frequently present in cannabis has the opposite effect -anxiolytic and antipsychotic. (Zuardi et al., 2006). Morgan and Curran (2008) compared the hair samples containing THC only, THC and CBD and no cannabinoids at all and measured the presence of psychotic-like symptoms within those individuals. The group with THC only demonstrate higher frequency of unusual experiences than those from other two groups. The result of Morgan and Curran's findings suggest that strains of cannabis with not only THC but also CBD content might prevent psychotic-like effects.

Providing information plays a crucial role in minimizing the risk of schizophrenia. Identification of the most vulnerable group is also important, specifically those with bad experiences with cannabis use and those with history/case of schizophrenia or another psychotic disease within family. Besides educating vulnerable individuals, it is also essential to inform their peers, so they can possibly notice any sign of the emerging disease and so encourage the user to cease any harmful behavior and seek help. It is fundamental to motivate users who experienced psychotic symptoms to stop using cannabis or at least reduce it (Hall & Fischer, 2010).

#### **1.3.2.2. Cannabis Use and Respiratory risk**

Smoking cannabis is similar to smoking tobacco in that it affects airways which can lead to cancer, chronic bronchitis, obstructive pulmonary diseases and other health damage (Owen et al, 2013). Tobacco smoke contains more than 6000 chemical components. (Huber, First & Grubner, 1991) A brief analysis of marijuana smoke was conducted. However, the content of both is quite similar - (Novotny, Lee & Bartle, 1976; Rickert, Robinson & Rogers, 1982)

Cannabis smoke, as well as tobacco smoke, contains vinyl chlorides, phenol, nitrosamines, reactive oxygen species, and various polycyclic aromatic

hydrocarbons (known carcinogens) comparing to tobacco. Marijuana tar has higher concentrations of benzo(a)pyrene and polycyclic aromatic hydrocarbons (Hoffmann, Brunnemann, Gori & Wynder, 1975). The amount of tar and carbon monoxide in smoke from pure cannabis joints is higher than in commercially prepared filtered cigarettes. (Gowing, Ali and White, 2000)

Several studies focused on the comparison between tobacco smoking and cannabis smoking (Wu, Tashkin, Djahed & Rose, 1988; Roth et al, 1998) Some of them also compared the effects of different consumption methods - e.g. water pipe, cannabis cigarette with and without filter, vaporization (Abrams, Vizoso, Shade, Jay, Kelly, Benowitz, 2007; Hazekamp et al., 2005; Gowing, Ali and White, 2000). Impact of puffing habits, as well as breathhold, was the focus of a few studies as well. (Zacny & Chait, 1991; Azorlosa, Greenwald & Stitzer, 1995).

Daily smoking of marijuana increases the risk of pulmonary symptoms (for example sputum, cough, etc.) Risk of COPD wasn't confirmed since a direct link between cannabis smoking and cancer was never found (Owen et al. 2013).

### **1.3.2.3. Cannabis Contamination or Adulteration**

Fungi, bacteria and mould are frequent contaminant in cannabis product, mostly *Aspergillus* fungi (Kurup et al. 1983). It was found that marijuana smokers show higher prevalence of fungi antibodies, with a majority of *Aspergillus* compared to cigarette smokers among whose fungi antibodies weren't found or only in a few cases. Other studies revealed that samples of marijuana obtained in coffee shops in The Netherlands contained mostly *Penicilium* species (Verweij, Kerremans, Voss, & Meis, 2000). Arno Hazekamp (2006) compared the contaminants of marijuana samples from Holland coffee shops with medical grade cannabis produced by Bedrocan. In samples from coffee shops he found these contaminants: *Pseudomonas aureginosa*, *Staphylococcus aureus*, also *Escherichia coli*, *Penicillium*, *Cladosporium* and *Aspergillus* species. Some of mentioned bacterias can produce hazardous mycotoxins like Aflatoxin B, Ochratoxin A and B and Sterigmatocystine. The presence of these contaminants in the product can have negative health effects. For example, in the case of Aflatoxin, it was proven that it

had carcinogenic effects. Fungi can also lead to neurological toxicity or infections like aspergillosis. Especially in the case of patients with HIV/AIDS, it could be hazardous using such a contaminated product as they have immune system impairments.

Besides the mold, cannabis can also be contaminated with pesticides residues, heavy metals or any other substances. Cannabis cultivated indoors is rather contaminated because of the substances used during the process of cultivation in order to produce higher yields. However, this shouldn't be so harmful to individuals as the content of pesticides was minimal in the final product.

Schneider, Bebingb and Dauberschmidt (2013) tested illegal cannabis seized on the Luxembourg black market on the presence of pesticides residues. Schneider and his colleagues screened 50 samples from which 38% (19) contained one or more pesticides, predominantly fungicides. All of the pesticides detected were allowed to be used on the European market. However, the health risk is not so dramatic, because of pyrolysis of pesticides during the combustion while burning the content of a marijuana cigarette.

Contamination by heavy metals usually occurs in areas with soil contamination, and therefore it is not a global problem (McLaren, Swift, Dillon, & Allsop, 2008). However serious lead poisoning was described by Busse et al. (2008) in Germany where 29 patients were admitted to hospitals in Leipzig area. All of them had a symptoms of lead intoxication. Three samples of used cannabis were obtained from patients. Further analysis suggested the lead was added to the cannabis rather than that get there by soil contamination. One of the samples contained even visible pieces of lead. According to Cole et al. (2010) the reason to add such an adulterant could be to increase the weight and so increase the profit. Another adulterants found except lead were glass and aluminum (Exley et al., 2006).

#### **1.3.2.4. Cannabis Dependence**

Budney (2006) dedicated his article to applying DSM-IV diagnostic criteria to cannabis dependence. Lack of control over the cannabis use, difficulties to stop



using the substance despite its apparently harmful effects, and giving up on hobbies and other leisure time activities are major symptoms of cannabis addiction.

Anthony (2006) mentions, that between the years 1990s and 2000s, cannabis dependence was the third most commonly reported (after alcohol and tobacco) drug. In the US the potential to develop cannabis dependence is almost the same as that of alcohol (Anthony et al., 1994). Approximately 10% of daily cannabis users can be diagnosed with cannabis dependence, and this risk can rise to 16% if the person starts during adolescence (Anthony, 2006; Hall & Fischer, 2010).

The number of people seeking treatment because of problematic cannabis use in US, Europe and Australia increased between 1980s to 2000s (Hall and Pacula, 2003).

According to Sznitman, Olsson & Room (2008) 390,000 people were seeking treatment for cannabis dependence in Europe in the year 2006, which was 21% of all illicit drugs treatment requests.

In order to reduce the risk of further development of dependence, it is crucial to inform cannabis users about this possible risk, especially the role of regular use and the amount of used substance. Similarly, as the case with alcohol, the brief intervention for cannabis consumption could be adapted within healthcare institutions (e.g. physicians) (Shand et al., 2003). This advice should particularly address those who experience respiratory problems, anxiety, depression or any other health issue that cannabis users commonly have (Degenhardt et al., 2001). Another potentially vulnerable target group could be clients of youth mental services or juvenile justice centers. (Hall et al., 2008a). Part of that brief intervention should be advice to cut down on quantities and frequencies of use and also to avoid the use before driving a car (Hall & Fischer, 2010).

#### **1.3.2.5. Social Risks Related to Cannabis Use**

Not so obvious but very important to point out is the social risks arising from cannabis use. The national policy on cannabis use varies depending on the country. While in some it is the possession and trafficking of cannabis that is illegal, in others

it is even the consumption itself. Police records lead to stigmatization and can damage an individual's career, education or personal relationships. (Wodak et al., 2002). Major of those who were punished for criminal offence because of cannabis did not commit any other crime (Lenton, Ferrante & Loh, 1996). Although the conviction have significantly negative impact on employment, individuals' economic situation, relationships and accommodation it usually does not discourage from the cannabis use (Lenton et al., 1999). There is no evidence that the absence of criminal punishments lead to increase of regular cannabis users (Donnelly, Hall, Christie, 1999). Besides the negative impact on employment or relationships the criminalization of cannabis could increase the possible risk of further experiments with other illicit drugs which are present on the black market (Swift et al., 2000).

One of the important step toward the risk minimization is providing relevant informations, so user are aware of the possible short-term and long-term use risks. Therefore he or she can make an informed decision about their further use. When users experience uncomfortable psychological effects (like anxiety for example) it is best if they stop use the substance. If they decide to continue despite the negative impact it is appropriate to encourage them to use certain limit of the substance and not to mix it with other drugs at least. In case of schizophrenia or psychotic episodes the cannabis use can worsen the individuals' conditions and that information should be provided to those who are endangered. Respiratory risk can be decreased by either using vaporizers or eating the cannabis as well as elimination of mixing cannabis with tobacco. Users should be informed about the possible risk of development of cannabis dependence too. (Swift et al., 2000)

To minimize the social risks connected to cannabis use can be managed via avoidance of public consumption or smoking with strangers as well as decrease the possibilities of being caught while carrying the drug. That can reduce the risk of being caught by police (Lenton, Bennett & Heale, 1999; Swift et al., 2000).

## **1.4. Model of CSCs**

### **1.4.1. Cannabis in Spain**

Cannabis is globally one of the most produced, trafficked and consumed illicit drug. There is around 147 million cannabis consumers, which is 2.5% of the world population (WHO, 2015). In 2012 was seized 5350 tons of cannabis and 1058 tons of resin (UNODC, 2014).

Spain belongs to the countries with the highest prevalence of cannabis use in Europe. The lifetime prevalence among people 15-64 years old was 32.1%, which was the second higher use in Europe after Denmark. The last year prevalence was 10.6% in 2011. Within the younger generation 15 - 34 the lifetime prevalence was even higher at 42.4%, the fourth highest in Europe. The last year prevalence of 15-34 year olds was 19.4% (EMCDDA, 2011). According to EDADES (2013) study from 2011 to 2012 cannabis was the most commonly used illicit drug in Spain. 27.4% of respondents who were between 15-64 years old stated lifetime use, which shows decrease compared to 2009 when the lifetime prevalence of cannabis was 32.1%. The same study says that use in last 12 months also dropped from 10.6% in the year 2009 to 9.6% in the year 2011. The average age of initiating use of cannabis in Spain was 18.7 years old. Higher prevalence of cannabis use was among males (EMCDDA, 2011). Last year, quite a high last year prevalence of cannabis use was also found among students 14-18 years old. National study ESTUDES (2014) shows the prevalence of cannabis use was 26.6% in 2011 and 2012. Spain is considered to be one of the spot of entry for cannabis, mainly resin from Morocco. However this trend is decreasing, as shown the lower seizures of cannabis resin in Spain when 356 tons were seized in 2011 comparing to 326 tons in 2012 (Maftei, 2012; UNODC, 2014a; UNODC, 2014b).

### **1.4.2. History of CSCs in Spain**

Based on the fact that cannabis cultivation in Spain for personal use is not a crime, the question if also shared cultivation is possible arose. The first movement

which started to be active in revealing uncertainties, began by ARSEC (Asociación Ramón Santos de Estudios Sobre el Cannabis), was founded in 1993 in Barcelona. ARSEC wrote a letter to the prosecutor in charge of drug issues querying if the shared cultivation would be regarded as a crime. Prosecutors' reaction claims that basically it is not a criminal act, and so 97 members participated in the experiment by the presence of the media. Although the event ended up with crop being confiscated, the charges were dropped. However the case ended up in Supreme Court which decided that the cannabis cultivation itself is perilous and should be punished. Consequently, the Supreme Court in the year 1997 ruled that they violated the art. 344 of criminal law and so the directors of the organization were fined and sentenced to a minimum sentence, what was suspended in the end. Between the years 2001 and 2003 the decision was contradicted with the conclusion that cannabis possession is not criminal behavior (even in a large amounts) if there is no purpose of trafficking. The other attempt to clear the situation was held by Basque organization Kalamudia. As in the case of ARSEC they collectively planted and grew cannabis. Around 200 people and some local politicians were involved. The action ended up harvesting the crop without any legal consequences. In the years 1999 and 2000, Kalamudia followed a second and third collective cultivation and both were harvested without any legal action. The foundation of the CSC concept was based, and activists started to look for a legal and conceptual framework of the associations (Barriuso, 2011; Herrero Alvarez, 2000). The next year a very important law analysis was created to explain related legislation. Authors of "El Uso Terapéutico del Cannabis y la Creación de Establecimientos para su Adquisición y Consumo" Juan Muños Sánchez and Susana Soto Navarro were both lecturers of criminal law at the University of Malaga at the time. The outcome of their analysis was that CSC should provide a place for private consumption to all regular cannabis or hashish users and would also ensure the supply of cannabis in certain limits. Supreme Court decisions, as well as the Muñoz & Soto (2001) analysis, served as the foundation for the CSC legal framework.

The first official club was founded in 2001 in Barcelona – the Barcelona Catadores Cannabis Club - Club de Catadores de Cannabis de Barcelona (CCCB).

The constantly unclear legal position of CSCs in Spain led to the detention of four members of Pannagh association and confiscation of their plants in the year

2005. However the previous precedents allowed to cultivate for personal use without being prosecuted. Therefore the case was closed and confiscated plants were returned (Barriuso, 2011).

In the year 2003 was established the Federacion of Cannabis Clubs (FAC). Initially included first 21 clubs. The purpose of the FAC was to associate CSCs, design the CSC's model and unify it so that it would be standardized and should guarantee certain level of quality. FAC intend to set that model with full respect to the Spanish criminal law as well as international conventions and possibly influence the legislation changes on local and national level. Their aim is to avoid commercialization which could possible lower the quality of the final product (FAC, 2010; Barriuso, 2012).

### **1.4.3. The Concept of Cannabis Social Clubs**

CSCs exist in many countries although the model has more varieties. The only fully legal position CSCs have are in Uruguay, ever since the law passed in December 2013. In South America other informal clubs began to appear in Chile, Colombia and Argentina. Their functioning role relies on the government's blind eye. In Europe it's mainly Spain. But Belgium, United Kingdom and France are trying to copy the Spanish model (Bewly-Taylor, Blickman & Jelsa, 2014). Some CSCs are also running in Slovenia, particularly Ljubljana. CSCs providing cannabis, based on medical reasons, also exist in Switzerland, New Zealand or Italy (Decorte, 2014b).

#### **1.4.3.1. Cannabis Social Club Definition**

The main aim of the CSC's model is to supply its members with cannabis and its derivatives, allowing them to avoid the black market and the risks involved with it. Based on the court decisions and law analysis (Muñoz and Soto, 2001) the following framework was accepted:

- To become a Cannabis social club, it is necessary that the organization is officially registered
- The amount of cannabis which is being provided is rational, appropriate to the individual consumption
- The annual limits per member should be defined
- The production capacity is organized according to consumption estimation
- Members must be adult regular users of cannabis or be registered at International Association for Cannabinoid Medicines (IACM)
- The production and consumption must be managed in a closed environment without any commercial purpose

The association must be officially registered and be able to demonstrate an associative activity. Once it is created and registered it should maintain these activities and their continuous operation. To demonstrate associative activity, CSC must hold an annual meeting with active participation of its members. The law of associations and internal rules must be respected. The FAC recommends creating and maintaining documentation of clubs' activities. It also recommends carrying out other activities together with members to promote associational activity. The main activities are Activism, Risk Reduction and distribution of information.

The amount distributed should be small, so that it can be considered for immediate consumption. According to the report Muñoz-Soto (2001), this minimal amount avoids the problems that transportation of large quantities could attract. There should be an upper limit on the amount of annual cannabis that is distributed to a member. Clubs generally have the limit between one and two grams daily, with limits of 5 grams a day in special cases. Special cases should be evaluated by each

association itself and its management and approved by the board. Members should be informed how to reduce risks at the same time.

The production is made according to the forecast of shared consumption of the members, not in terms of an open and uncontrolled demand. Cannabis production of an association must always be supported and justified by the partners and should keep track of such production forecast.

Members of the club must be adult cannabis users, or must have a medical condition recognized by the IACM as susceptible to treatment with cannabis. All members must be previous users of cannabis. To prove this, only members that are confirmed by others as regular cannabis users are accepted. In the case of members from therapeutical reasons, the valid medical certificate recommending cannabis use is required. Each club also has their own rules which must be complied, as well as an annual fee which must be paid to cover cultivation and management costs. Since CSC's are nonprofit organizations, all profit is reinvested within the CSC or used for organizing certain activities (political activity, conferences, etc.) provided by CSC (Barriuso, 2011).

First, the consumption estimation is calculated according to the number of members and their consumption. The land for crop cultivation can be either bought or rented, as well as equipment and buildings. Volunteers from members or hired professionals are responsible for caring for the plants. All accountancy has to be recorded very consistently and transparently. Marijuana is grown either indoor or outdoor (Barriuso, 2011').

Cannabis in CSC's is usually distributed in small amounts as it's expected to be used for immediate consumption. Quantities vary from 2 to 3 grams per day with the exception of therapeutical users. However, the members can withdraw higher quantities for following days, so they don't have to come to CSC daily.

The club can only be visited by adult members. In some cases non-members can come accompanied with a CSC member.

Although the main purpose is to produce marijuana for CSC's members, hashish and other cannabis products are also on the list (for example oils, creams, tinctures, etc.) as well as equipment for alternative ways of use.

To become a member it is necessary to have a reference from someone who is already a member of a CSC and can confirm that the person applying for a membership is a regular user of cannabis (FAC, 2010).

#### **1.4.3.2. Harm Reducing Activities of CSCs**

Besides the cannabis production and supply, CSC's should also reduce risks rising from cannabis use. This risk minimization is mainly managed through providing information about prevention of negative effects and also supplying the member with cannabis products so he or she can avoid the street consumption and obtaining products on the black market which is connected with particular risks (for example Hazekamp, 2006)

The CSC should set up the limit of the maximum annual quantity per member with an option to increase this amount in special cases. Typically, CSC's have a daily limit from 1 to 2 grams per member, with the highest amount of 5 grams daily per member under certain exceptions. These special cases must be agreed by the particular CSC's board, and the member is supposed to be informed of how to reduce risks at the same time.

The harm reduction activities of CSC's are described in the guide "How to create un Club Social de Cannabis". One of the main harm-reducing impacts is the fact that members don't have to obtain products on the black market, because they are supplied by the CSC's they are a member of. That provides for the product to be cultivated in hygienic conditions and also prevents the risk of obtaining an adulterated product. Furthermore, it prevents illegal public consumption (Ley Orgánica, 1999) since CSC's provide a place for it. Additionally, more activities reduce risks because it continually provides information about possible risks arising from cannabis use to all members. They also inform members about safer ways to use cannabis, emphasizing the importance and responsibility to obey the laws. All this information should be available to all members at any time. (FAC, 2010)



## **2. Research Design**

### **2.1. Aim of the Research**

The aim of the research conducted for this thesis was to reveal how Spanish CSC's function on a daily basis from the members' perspective, what the rules are and how the cannabis cultivation and distribution is carried out. The purpose is also to describe the CSC's membership criteria. Although this is an explorative research, in addition, it could indicate the possible weaknesses and strengths of this model, as well as possible risks and benefits for its members.

### **2.2. Research Questions**

- What is the motivation to become a CSC member and the benefits of it
- How does the club function on a daily basis according to respondents
- How have the consumption patterns of respondents changed since they entered the club
- How do participants perceive the risks associated with the black market?
- Is there, according to participants, any quality assurance in CSCs? If so, how is that managed?

### **2.3. Methods**

The open explorative qualitative study design was used, because of the lack of relevant literature and previous research on this topic, in this case according to Miovský (2006) using the qualitative approach appropriately. For data gathering, qualitative data was chosen using a semi-structured focus group method (Miovský, 2006; Morgan 2011).

### **2.3.1. Data Collection**

A focus group method was used to collect data, where qualitative data are gathered using the group interaction during the discussion on a particular topic (Miovský, 2006). Focus groups were moderated by the thesis supervisor.

Participant sampling was managed through the institution, when the focus group was announced to members with the possibility to participate. Preparation of the semi-structured interview and recording technology was crucial. Digital Dictaphone was used for recording focus groups.

Qualitative data were gathered via 14 focus group interviews with the selected social club members. The focus groups were conducted on the premises of the social clubs. The lowest number of participants in a focus group was 2, the maximum number was 12. A semi-structured interview was chosen because it allows the flexibility to react to new topics that could appear during the interview and therefore provide better answers to the research questions. The number of focus group participants was twelve at maximum. All participants were familiar with the interview's purpose and agreed to participate. The interviews were always announced to social club members, and there was no obligation to participate. Basic rules for all focus groups were the following:

- Just one person speaks at a time
- Common language is Spanish
- If you don't agree with another person after he or she finishes, explain why you don't agree
- If no one says anything, it means we agree with what has been said

Each focus group took 50 to 90 minutes and included 13 main questions, which were supplemented with more detail questions if needed. This time was set to be enough for each participant to have space for sharing their contribution (Miovský, 2006). Basic interview questions were the following:

- Why did you first join the association?
- If you were a member of other associations, why did you choose this one in the end?
- Did you reach your expectations?

- Could you describe how the association works?
- Could you describe your typical visit?
- Are there some unusual or special days?
- Could you describe the quality of the product cultivated within the association?
- How can you recognize the quality?
- Have you ever visited the cultivation or seen any certificate confirming the quality?
- One typical situation...(*how did you obtain cannabis before*)
- How has the black market changed since the associations exist?
- How has your consumption changed?

### 2.3.2. **Data Sample[1]**

In Spain, the majority of cannabis social clubs are present in the Catalanian and the Basque region. In each of the regions, cannabis social clubs have federated in FAC and its local divisions (EUSFAC - Federacion de Asociaciones Cannabicas Euskadi in the Basque country and CATFAC – Federacion de Asociaciones Canabicas Cataluna in Catalonia) (EUSFAC, 2015; CatFAC, 2015). FAC was created in the year 2003 in order to maintain and promote a restricted cannabis social club model through auto-regulation of its members, as well as to unite cannabis social clubs for political representation that would impose regulation from the authorities. In both regions, alternative federations have emerged in the course of time, namely FEDCAC (FEDCAC, 2015), EKHEEF (ENODC, 2015) or CANFAC (Balears) (CANFAC, 2015), as an opposition or complementation to the restrictive model. There are many cannabis social clubs that are not federated in either of these (Barriuso, 2012).

In the process of recruitment, all five federations were approached with a request to pass on information about the study to their respondents and to provide space for a group interview as a part of the program in their opening hours if there was a substantial interest from the part of their members. Out of the five federations, one refused to facilitate access to their members, three of them forwarded the request and helped organize interview sessions in its member association, and one

facilitated a focus group with members of social clubs directives that had led to a follow-up recruitment. In the region where the federation refused to take part in the study, social clubs were approached individually by the main study investigator via phone and/or email. As a result, representatives of all five federations were interviewed, as well as of social clubs that are not federated.

Particular CSCs were nominated through the Federacion de Asociaciones Cannábicas (FAC) who are associating 93 CSCs all over Spain (FAC, 2014). Fifteen CSCs were selected from 4 different regions and offered to participate in the research. Because of economic reasons, only 4 regions were visited. However, chosen regions and social clubs represent variability in terms of the size of the region and a number of clubs registered there – Catalonia (27 CSCs registered at FAC; 7, 411,869 inhabitants), The Basque Country (9 CSCs registered at FAC; 2,166,184 inhabitants), the Balear Islands (5 CSCs registered at FAC; 1,115,374 inhabitants) and Galicia (2 CSCs registered at FAC; 2,747,207 inhabitants) (FAC 2014; INE, 2014). They were contacted via email or via phone. 94 respondents took part in the total of 15 focus groups across Spain. Simple purposive sampling via institution was used to recruit participants, who were contacted through particular CSC. Simple purposive sampling is one of the easiest sampling methods – whoever meets research criteria and is willing to participate (Miovský, 2006) – the criteria to participate in a focus group were to be a member of the particular CSC, and to be willing to take part in the focus group. This sampling method was chosen because of economical and time reasons.

*The more specific information about the focus groups is given in the table below:*

| FG | Duration of FG (minutes) | Participants description     | Number of FG participants |
|----|--------------------------|------------------------------|---------------------------|
| 1  | 56.5                     | director, employee, members  | 6                         |
| 2  | 41.5                     | 2 employees, 2 members       | 4                         |
| 3  | 45                       | director, members            | 7                         |
| 4  | 39                       | members                      | 7                         |
| 5  | 41                       | director, employee, members  | 5                         |
| 6  | 54.5                     | employee, members            | 6                         |
| 7  | 30                       | members                      | 2                         |
| 8  | 51                       | director, employee, members  | 9                         |
| 9  | 50                       | employee, members            | 12, 10 speaking           |
| 10 | 90                       | employee, members            | 8                         |
| 11 | 90                       | member of the board, members | 4                         |
| 12 | 90                       | member of the board, members | 6                         |
| 13 | 60                       | members                      | 6                         |
| 14 | 78                       | directors, members of boards | 12                        |

### 2.3.3. Data Analysis

Interviews were recorded and transcribed to text afterwards using verbatim transcript. Text was briefly read to summarize basic commonalities and for setting of fundamental topics. Then the text was reduced by the first order reduction, which means that the part of the text that didn't contain any specific information was skipped (Miovský, 2006). Qualitative data were analyzed through the Nvivo7 – data analysis software designed for qualitative research. The inductive method was used, framed by grounded theory (Corbin&Strauss, 1990), using open coding. The common topics through all FGs' interviews were categorized into clusters, which were afterwards ordered into subcategories if needed.

Data were interpreted via references and focus groups where the topic was mentioned. Both information are seen in brackets. E. g. "*Hashish (5 references / 2 FGs)*" means that hashish was discussed 5 times during 2 different focus groups. References is the part of the interview coded as a certain category. That could easily

indicate how often particular topic was mentioned. For data interpretation codes with the most references were used.

Qualitative study provides quite high validity but low sample of representatives. However for the purposes of the study is this method suitable. The aim is to identify particular phenomena connected to CSCs.

#### **2.3.4. Focus Groups**

For gathering socio-demographic data of respondents a questionnaire was prepared. The questionnaire was applied for collection of data containing socio-demographic details, experiences with psychoactive substances and a marijuana market pattern to social club members who had participated in a focus group before. These data were collected through the questionnaire containing 37 questions divided into three parts: Demographic characteristics, experience with psychoactive drugs and the marijuana market. 94 questionnaires were collected within members of different social clubs. Quantitative data were analyzed using SPSS software. Descriptive statistics and frequency analysis of the questionnaires were compiled.

94 respondents took part in the total of 14 focus groups across Spain in 4 of its regions – The Basque Country, Catalonia, the Balear Islands, and Galicia. The focus groups were conducted on the premises of the social clubs. The lowest number of participants in a focus group was 2, the maximum number was 12.

#### **2.4. Ethics**

In case to protect research participants, main ethical principles were followed during the research. Principal ethical norms are (Miovský, 2006):

1. Informed consent for the research participation
2. Anonymity and confidentiality (data will be proceeded anonymously)
3. Prevention of participants' harm or damage during the research

At the beginning of the audio record, before the interview started, respondents were informed about the research purpose and the risks related to their study participation (e.g. mentioning crimes or delicts committed). In order to guarantee confidentiality and protect the anonymity of the respondents, they were asked not to mention their surname, as well as the surnames of others, which could eventually reveal someone's identity. They were also prompted not to specify the names of the particular Social Cannabis Club. If any member or CSC were named, the researchers subsequently replaced it at the point of reviewing the transcripts. All participants were informed about the possibility to terminate the interview at any time. They were also assured that an audio record would be stored safely and accessible only for people directly working on the study. Respondents provided verbal consent and agreed to participate voluntarily.

### **3. Results**

#### **3.1. Sample Description**

94 questionnaires were collected among focus group participants recruited from visited social clubs. 77 male and 17 female clubs' members filled it in. The youngest was 18 and the oldest was 67. From 94 respondents 87 respondents reported their age, 7 did not answer this question. Mean age was 34.7. The majority of participants, 66 (70.2%), reported being single at the time of the data gathering. 16 (17%) were married or in partnership without children and 12 (12.8%) in a relationship either married or partnership with children. Most of the respondents announced that their highest obtained education was secondary education 43 (45.7%), 9 (9.6%) finished only elementary school, 28 (29.8%) graduated from college and 13 (13.8%) from university, 1 (1.1%) respondent did not answer.

The length of membership history within FG's participants ranged between 'less than one year' and 10 years. However, the majority of them reported that they have been members for 2 years (11 references in 6 FGs), little less announced being member for 1 year (8 references in 6 FGs) and 4 years (7 references in 4 FGs). They also mentioned the number of members in their CSC, which differs from 6 to 400, most frequently from 101 to 250 (5 references in 2 FG). In most of the cases the current CSC they are member of is also the first one (9 references in 6 FGs), although somebody mentioned another membership before (2 references in 2 FGs).

#### **3.2. Focus Group Content**

The topic most discussed during the focus groups was "How CSCs operate/function" (920 references [2] through all 14 FGs). This theme contained e.g. product acquisition (298 references/ 13 FGs), time spent in CSC (155 references / 14FGs), financial aspects of CSC (38 references / 10FGs), social aspects (22 references/6FGs) and other content covering the functioning of the club itself.



Other areas most discussed during FGs were Quality of marihuana in a CSC (727 references/14 FGs), Black market in general (694 references/14 FGs) and benefits of being a member of a CSC (683 references/14FGs). The impact of CSC's membership on participant consumption was also discussed (327 references through all 14 FGs). Participants frequently spoke of the way they chose the product (239 references through 13 FGs) as well. The topic covering area of police and security was mentioned in many cases (231 references through 12 FGs) too.

Most often mentioned reason to enter particular CSC were friends who were already members (18 references/ 6FGs) and proximity (14 references / 7FGs), besides that participants mentioned political activity, quality of the products, atmosphere or that the previous one was closed down.

### **3.3. How CSCs Function**

CSC's functioning code covers topics relating to the organizational structure of CSC's, rules, fees, membership etc. These areas were discussed across all 14 FGs and has 920 references.

#### **3.3.1. Product Acquisition**

The product acquisition code includes all activities connected to product distribution and its management, for example the quantities which are distributed (106 references through 12 FGs), especially the limits and also formalities necessary to acquire the product like signatures and personal data (5 references across 4 FGs). While each cannabis social club differs in their rules and culture, below we are summarizing some general features, as described by the respondents.

The limit for cannabis acquisition is usually on the basis of a daily, weekly or monthly limit. The daily limits vary from 1 gram per day to 3 grams per day per member. The quote below is an example of that:

*"You have a monthly consumption. I think it's 2 grams per day."*

Some members pick their amount every day, some of them less often. In that case they pick up bigger amounts at the same time as the following statements prove:

*“There are members who come every day. They get one gram, smoke it there, go home, and the next day they’re there again. There are members who come from further away and take 2 week’s worth, they take a whole month’s worth. There are different kinds of members. There are others who come every weekend and take part of their supply and smoke at the weekend because they smoke it during the week and they come back the following weekend. Every member is completely different.”*

Some CSCs have a different policy and they distribute the product once a month as is mentioned in the example of the following quote:

*“If we distribute once a month, it meets the provisional limit of consumption for the month and they take it once a month. For us it’s more complicated. It’s easier to take it all instead of going all over the place every day. It’s unrealistic. “*

There is a difference between members using for therapeutical reasons, who have different limits according to the following:

*„There is also an annual limit. One for recreational use, another for therapeutical purposes. “*

*„The only thing is that the people who need it for medicinal purposes have other conditions. They don’t pay an annual fee which others do. If they actually have limited mobility, the drug is taken to their house once a month and we offer the cheapest fee possible. “*

According to respondents, the limits can be re-set if necessary. However, there is a limit that cannot be allowed to go over. The quotes below are an example:

*„It can always be modified. “*

*“You can modify the monthly amount that you consume at any time. We also work towards the prevention of risks*

*“Depending on what you want, if you want 5 or, if you want 2, as long as you respect our rules. However, we are not going to give you more than 14 grams. That just seems like too much.*

### 3.3.2. Time Spent in CSC

Focus groups revealed how respondents usually spent their time in CSCs. They mainly described activities they usually do in CSC (60 references through 10 focus groups). When they talked about their typical visit (59 references through all 14 FGs) they mostly compared it to a bar, but much more creative as is mentioned in the quote below:

*“It’s like being in a bar, but much more creative.”*

Participants usually reported playing games (8 references), workshops (6 references), listening to music (3 references) or watching a movie/TV (3 references). As you can see the example in following quotes:

*“You could play a game of chess. We’ve done it before.”*

*“Well, we sometimes do hashish workshops, for example.”*

*“We sit down on the sofa, listen to music, talk, play the guitar, and other things.”*

They also described the social effect, even if it’s not intended, as in the example below:

*“I come to relax, but I always sit down for a while to talk to people. I also think it’s important to socialize.”*

Some participants (20 references) talked about the way the cannabis is distributed and consumed in the CSC. Respondents mentioned that the consumption patterns differ. Some of the members just come and pick up the product and leave, others come even twice a day. However, the CSC works quite similarly as bars or other social clubs, but with the possibility of smoking the cannabis inside. The following statements demonstrated participants’ experience with product distribution:

*“How do we consume? Normally, we go to the smoking room. And, as you arrive, others usually pass by. You ask who the last one is. We’re really known for that. And, once this happens, you go to the smoking room and they show you how different yours is. Sometimes there is more variety, other times there is less. In my case, I just ask the dealer*

*what his tastes are. You can ask him if you might like this kind or not. But, they know us more or less."*

Some of the respondents said that they visit the CSC every day, others 3 times a week, and some just once a week to pick up their part of the cultivation. Also, the time spent in CSCs vary from 30 minutes to several hours. The following quotes serve as an example:

*"Two or three times a week"*

*"Some come once a week, others come every day"*

*"R: There are people who live for smoking. They come in the morning and leave when it runs out.*

***Q: Is it a particular type of people?***

*R: People without a job, or that are on holiday, or that they simply want to help."*

### **3.3.3. Financial Aspects**

According to FG's participants, the price (9 references in 8 FGs) in CSCs vary diverse from 4 to 6 euro per gram, when exterior is cheaper due to lower cost. See the following example:

*"4-5 euros per gram"*

*"Outdoor 4"*

Fees (5 references across 4 FGs) and non-profit purpose of CSCs (5 references in 2 FGs) were also discussed as we can see in phrases below:

*"Like a closed membership club, the profits go toward expenses."*

*"You are talking about a product that you are cultivating and you know who it's cultivated by. That's a market. The members cultivate for the members. Auto cultivation."*

### 3.3.4. Social Aspect of CSC and its Members

Social aspect of the CSCs (22 references in 6 FGs) is a significant feature. From the discussion it was obvious that for participants it plays an important role. They, besides other things, reflected its learning aspect, as demonstrated in the following quote:

*“The benefit of a clubs that associates a lot of users together is that one knows some things, somebody else knows others. Many ideas are collected. And many times you can read studies. Moreover it is not just about obtaining the drug but also not to be alone at home. I think is that atmosphere or people who can create workshops. All of that can create beautiful things[4].”*

Members and other people participating and visiting clubs were discussed as well (18 references/8FGs). Some of the participants described the ratio of members in terms of regular members, those who cultivate and therapeutics, as is shown in quote below:

*“In “location X”, we are around 50 members, where 37 participate in shared cultivation, there are 9 therapeutical and we distribute 1.2 kilos a month more or less[5].”*

They also explained some reasons why people who don't smoke visit the club. Nonsmoking visitors come because of the atmosphere of CSC as demonstrated in the following example:

*“Yes, even people who weren't members of any other club came, there was also many people who weren't members and didn't smoke any joints and they were in the club and were just enjoying the nice atmosphere”*

### 3.3.5. Rules

The theme of rules was brought up[6][7] (16 references/7 FGs) while speaking of the organizations of clubs' daily routine. Consequently people under age are not

allowed to become a CSC member, the age limit differs but it is usually 21 or 23 years.

*“To become a member you have to be older than 21..about 23, and to know someone from the club who would reference you and be accountable for you.”*

It is forbidden to traffic the marijuana which members acquire in CSC. According to participants, the violation of this rule is punishable by expulsion from the club, which is proven in subsequent statements:

*“We had one like this, who came with 10 euros. He left and came back for another 10 euros in 15 minutes. We followed him and realized that he had been selling it on the street. And, when we found out, we expelled him from the club.”*

*“Yes, of course - not trafficking the marijuana that you get here is a rule.”*

To become a member it is necessary to have a reference from somebody, who is already a member and who guarantee that the candidate is a regular cannabis user as is mentioned in the quote below:

*“To become a member, you need a person who is a member that will recommend you.”*

### **3.3.6. CSC’s Interventions in Case of Abuse**

The intentions of CSCs is to provide the cannabis to its members so they can avoid the risk of black market, but another aim is to seek the responsible consumption of cannabis. So if any member shows lack of control connected to cannabis use or other problems like emerging mental health issues, the CSC intervenes (14 references/6FGs) as is demonstrated in next parts of FGs discussion:

*“We seek the responsible consumption - that’s the main goal.”*

*“We simply try to give the member the right to see how much they consume in euros and how much they consume in quantity and we try to analyze if there is any problematic consumption.”*

***“Q: Do you remember any case where you thought a member shouldn’t smoke at all?”***

*R: Out of the 2800 members that are here, I’ve only had a problem with one because he/she had a problem with schizophrenia. The rest of the problems were connected to alcohol.*

***Q: And how did you deal with this person?”***

*R: He started treatment and the illness wasn’t compatible with being a consumer.*

***Q: And how did it end up?”***

*R: Well, it was our decision. But he agreed, because he knew that he wasn’t well. “*

Some of the members work in the CSC. As it is mentioned in the quote below, providing them with a job could also possibly reduce or control their consumption:

*“Since I work here, I try to smoke less because I need to concentrate on my work and that helps me to spend and consume less.”*

### **3.3.7. Other**

The CSC either has its own cultivators or it buys the product from an external contractor as stated in the following example:

*“The club must do the community purchase to be supplied.”*

*“R: One direct example is a friend from school who used to sell to his classmates, and now he sells to the clubs.”*

***Q: And is that good or bad?”***

*R: For me it’s ok, because it’s the same job. But, before, it was done in a black market. And, now it’s more public and normal.”*

### **3.3.8. CSCs and Police**

CSCs still don’t have a secured legal position, based on the fact that police sometimes intervene in CSCs. This topic was also discussed during FGs (31

references /7 FGs). The risk is the confiscation of cultivation as is proven by the example given below:

***“Q: Have you ever been robbed?”***

*R1: No, robbed no.*

*R2: The police confiscated it.*

***Q: How many times?***

*R1: One time. “*

The examples of the impact of such a confiscation are shown here:

*“Right now it’s complicated, but when we normally worked, in other words when we had a self-sufficient cultivation, the police intervened and took the supply. And, it’s difficult to get the production equipment back - it costs a lot of money. The people ask for advice when they want something for different reasons, some for work, others for creative purposes, others for sleep, etc... Each one has their personal needs.”*

Or police can control the documents - if all and everybody are registered in the proper way:

*“For us, in case they come into the club and ask for records, we’re prepared - we have the records.”*

### **3.4. Reasons to Join CSC and Benefits Provided to Members**

#### **3.4.1. Social Reasons**

Social reasons were one of the most mentioned reasons to enter the CSC (86 references in 11 FGs). Most of the respondents reported social reasons as a motivational factor to enter the club. Either their friend mentioned to them that CSC’s existed and they could just join them at the association (10 references/5FGs), or they generally appreciated the socializing effects of CSC’s (14 references/7FGs), an example of this is the following statement:



*"For example, in my neighborhood I really don't have friends, but people there don't smoke, and here I can integrate better with people."*

Some of them just don't want to smoke alone (4 references/4 FGs). One participant mentioned the educational effect<sup>[8][9]</sup> (1 references/ 1 FG). But quite often (16 references / 8 FGs) FGs' participants discussed they have a place to consume drugs without stigmatization which they experienced outside CSCs. They don't have to hide or not being seen as a "drug addict", as the following quotes demonstrate:

*"What attracts me the most about this place is that you feel accepted in a way that you don't in public. Here nobody will look at you strange because you're smoking. It's idiotic, but outside these doors it's not like that. Here, you feel very comfortable. "*

*"Avoid being marginalized"*

*"We always see the same people. So, we all know each other. More friendships."*

### **3.4.2. Providing Information and Responsible Use**

Besides social reasons, many participants pointed out that the information CSC provides is a great benefit of the clubs (80 references/12 FGs). Information in general (15 references/6FGs) and information about the product (14 references/7FGs) were mentioned most frequently. The knowledge about the process of cultivation was just slightly less frequent (6 references/4FGs), as we can see in the statements below:

*"Here, many of us have had the opportunity to know what seed we're planting, you know what they are giving you, in what soil you're planting it in, and what you are smoking."*

*"This especially seems safer. For me, it's one of the main reasons - the information. Also, how it's planted, is something that concerns me."*

Some of the respondents also reflected how the awareness has impacted their consumption patterns. Moreover, they talked about courses, information about safer use or information about other cannabis products. Information about therapeutic use was discussed as well (3 references/4 FGs). Some of participants

think that CSC's provide a broad information scope about the quality, cultivation procedure and cannabis in general which they would never obtain on the black market. As the example mentioned below:

*"Each plant serves a different purposes. On the street they won't tell you. Here they do."*

Another advantage that was brought up during FGs was that they are much more informed about varieties which exist and the effects that the chosen product should have. They can also ask the personnel any time for further information. The following statement is an example:

*"It gives me peace of mind to know that when I come in I can find anyone that can tell me about the product that I'm smoking."*

Respondents also debated the benefit of adopting more responsible consumption patterns (10 references/5FGs) as a consequences of being member of the club. The following extracts from the focus group are used as an example:

*"Now you know more. You know the difference between a sativa and an indica. You know what you have. You ask and they tell you. On the street, they don't. Therefore, this information makes you a more responsible smoker."*

*"Here they give you a lot of options and you have more responsible smoking consumption. You don't get so dependent because you know that you already have it here. We are here to give the member what they request. If they want variety, we give them variety."*

### **3.4.3. Security, Comfort and Stability**

Many times participants claimed to feel secure and safe in the CSC (50 references/13FGs), they usually mentioned that they don't have to hide, be afraid of police, and they have a calm place to consume cannabis. Especially since it is prohibited to consume cannabis in public spaces in Spain, many respondents appreciated having a place to smoke without risk of getting arrested. The example is given in the quote below:

*“It’s a small space of freedom. On the street they fine you, here they don’t.”*

Another of the CSC’s benefits is the comfort it provides to the members (61 references/11 FGs). Participants predominantly highlighted the fact that they have a place to stay (14 references/7FGs), they can use the cannabis peacefully (6 references/ 5FGs), and also that the CSC has fixed opening hours when they can get the product (4 reference / 2 FGs). These motivations are demonstrated in the following examples:

*“We used to smoke in the bars, where they’ve recently prohibited smoking. We came here in order to smoke indoors. It’s a place where we can smoke legally. There are no other places outside of your home or this place.”*

One of the advantages the CSC has compared to the black market is the stability of supply (9 references /7 FGs). The product is constantly accessible during the year independently from the harvest season - the supply should be stable. The following examples should represent the participants’ opinion about that:

*“In the black market, they work a lot depending on what the cultivation season is like. You may find out that momentarily you need a lot for medicinal purposes and realize that there isn’t any. In a club they try to look for stability.”*

#### **3.4.4. Avoid the Black Market and Legally Obtain the Product**

The intention to enter the CSC to avoid the black market was discussed among participants quite often (58 references/12FGs), mainly because of the product quality they found on the black market (12 references/6FGs) and risky situations which they could face to (7 references/5FGs). They also found that obtaining drugs on the black market is time consuming (4 references/ 3 FGs). Another reason they wanted to avoid the black market was that there was no information about the product (3 references/2FGs). The example is in the next statement:

*“Me too. On the street you don’t know what you are smoking. What do they sell you?”*

Several respondents mentioned that they enter the club because they wanted to cultivate in legal manner (6 references/ 2FGs) as is demonstrated in following examples:

*“Many of us that are here had already cultivated before joining a club. And, with the intention of the club we can continue cultivating in a legal manner, apart from obtaining marijuana and smoking it freely.”*

*“I joined to cultivate - it’s my passion. If I have a way to make it legally, it’s my main reason to join the club.”*

*“It is the responsibility to know the product from the beginning to the end of the process. From the producer to the buyer.”*

A common motivation for joining a CSC was to obtain cannabis. CSC (21 references /12 FGs). According to participants, The CSC allows them to avoid the complicated process of obtaining cannabis on the black market:

*“To obtain marijuana in a normal way without resorting to the black market and with guarantees of the cultivation.”*

### **3.4.5. Activism**

To support the cannabis regulation or legalization, it was also mentioned during the discussion the motivation to join CSC’s (18 references/7FGs). Participants stated that the membership is also about to promote cannabis culture and change the legislation. The example is given in further comments:

*“The goal is not only to acquire cannabis, it’s also about changing legislation.”*

*“It’s important to consider how unfair it is that one plant is illegal. So this is another reason to get together and fight.”*

### 3.4.6. Quality of the Product and Offer of Varieties

One of the biggest benefit respondents often talked about is the quality of the product CSC provide (49 references / 12FGs). They think the product what CSC provides is high quality, purity and controlled. Besides that the quality is complemented with the information about the cannabis the example is given in the next sentence:

*“For example, I wanted variability and a guarantee of quality.”*

Similarly as the quality of the product, the broad offer of varieties was one of the motivations to join the club (19 references / 8 FGs). This is proven in the sentences below:

*“When I first joined the club, it wasn’t to smoke healthier. I wanted to smoke more varieties. In the beginning it was for that. Everything else is a plus.”*

Varieties and its offer were widely discussed during the interviews. Participants talked about the benefits of having more varieties to be choose from (28 references / 7FGs), among them was higher productivity. Some of the mentioned benefits are demonstrated in the following quotes:

*“It’s historical and ancestral. For many years different varieties of indica have been used to relieve pain just as well as for creative activities such as music and cooking, for example. The inspiration comes from the sativa effects. For me, all of that is very important, as well as the amount, because you can use it according to intentions.”*

*“Basically that’s what it’s about: the type of weed that you choose is based on personal taste. One is good to relax and disconnect, another to be active.”*

The difference between sativa and indica (10 references / 6 FGs) as well as between indoor and outdoor (8 references / 5 FGs) was included While speaking of varieties:

*“I like the indica variety more. For me it tastes better and I like to smoke it and chill me out, because I smoke at night after work. Therefore I prefer indica over sativa.”*

### **3.4.7. Medicinal Reasons**

A few of the respondents entered the club for medical reasons (11 references/5FGs), as it is mentioned in the statement below:

*“My reasons are purely medical. I was looking for a solution to a health problem. Among other things and I read I could find the solution here. I began to look and found myself here.”*

### **3.4.8. Other**

Reasonable price was claimed as another CSC advantage and reason to become a CSC member (5 references /5FGs) from what we can see in examples below:

*“The quality and the price.”*

*“Price, amount, and quality”*

The possibility of getting a smaller amount of cannabis was also mentioned, as we can see in the quote below:

*“The minimum that you can buy outside are 5 euros, which is one gram. Here, there is no minimum.”*

### **3.4.9. Reasons Not to Join the CSC**

While many reasons to enter the club and become a member were mentioned, participants also discussed the reasons of their fellow cannabis smokers who are not CSC members for not joining any association (111 references / 7FGs). The reason mentioned most frequently was the reluctance to insert personal data (10 references /5FGs), what is obligatory when becoming a member, as it is illustrated in the given example:

*“What I wanted to say was that what people are afraid of is that if there is ever a police raid they can get your personal information. But, man, this is what I think. That’s just not right because the responsible ones are the promoters. The only time when someone could see our personal information is when the judge asks for it. ”*

The other reason why cannabis users probably don’t want to come to CSC was their fear of police (8 references / 3 FGs), lack of information about CSC (7 references / 4 FGs), fear of being stigmatized (4 references / 3 FGs) or financial reasons (4 references / 3 FGs). Some examples are given here:

*“Above all, they are afraid of the police.”*

*“I think for most people it’s lack of information, that’s the question, because there have been many who have seen it from the beginning and they’ve said that this is right. But, like everything else in life it’s because everyone has a different path to walk, therefore there is a lack of information.”*

Some of the possible arguments according to the FGs participants could be that those people don’t see the benefit or just don’t want to. Some of them probably cultivate on their own or have their own supplier and so don’t feel the urge to become a member. Some are simply under age, used to the black market environment, lazy, or they don’t have any CSC around to go to.

### **3.5. Impact of CSC Membership on Cannabis-Related Risks**

CSCs has a broad scope of benefits for its members as was mention in previous chapter. The quality of the product as well as avoidance the black market could possibly reduce some cannabis use related harms. This chapter will try to suggest the potential harm reducing impact of CSCs. However it is necessary to point out that these findings are based on subjective perception of the participants.

Change of consumption patterns was mentioned during all 14 FGs (327 references). Respondents mostly talked about the quantity they used (160 references in 14 FGs) when most of them reported the lower use since they entered the CSC (50 references in 13 FGs). Significantly less FG’s participants reported their use was on

the same level (13 references in 8 FGs) or even higher (12 references in 9 FGs). They also pointed out that since they are members of CSC their use is more responsible and regulated (29 references/9FGs). Respondents also talked about the expenses paid to obtain product (12 references/5FGs).

### **3.5.1. Decrease of Consumption**

Majority of respondents who talked about change in the quantity they used, reported a decrease in the amount of product they consumed (50 references in 13 FGs). The subsequent statements serve as an example:

*“I think that I smoke less since I’ve been in the club.”*

*“In my case I’ve lowered the consumption. But, above all, I used to buy 25’s because it was cheaper and lasted me a long time. Now I don’t have to worry, and I’m much more organized. Yes there are times when I end up with nothing. But since I know that the following day I go here, I organize myself better.”*

*“It helps me to smoke less.”*

Some of the reasons was also the fact that they feel secure about the supply, so they are not driven by anxiety to buy or consume higher amounts than needed. Since they are members of CSCs their intake stabilizes and so is often smaller than it was before.

*“To know that you have the security that you have it here. There are times that you smoke less, because you don’t have the anxiety about not being able to obtain the product. I believe that this fact calm us down.”*

*“Yes, I have lowered the consumption a lot. Like he said before I smoked more compulsively. The quality also helps. I’m not sure why, but I used to have a much higher consumption. But, now I intend to consume as the club does, and not to look for more, but rather limit it. I try to keep this way in my free time. Or at least I watch how much I consume in a monetary way, to not spend so much. Because if you look for it outside, you’re smoking too much. I’m not sure how to say it... I always end well in this way. Before, you would smoke more because you simply had more, at least in my case.”*



### **3.5.2. The Same Level of Consumption**

Although in some cases respondents reported the same use as before (13 references in 8 FGs) which is proven in following examples:

*"I smoke more or less the same"*

*"Equally as before. This has not changed. The only thing that's changed is the access to information"*

Nonetheless they admit to being aware of using higher quality at the same time as is illustrated in sample below:

*"It's true that thanks to the club, we have access to more varieties of marijuana and the better quality, that's positive. You smoke neither more nor less; we just smoke better. My personal consumption hasn't changed. But, the quality has improved."*

*"I smoke the same, but now it's a better quality."*

### **3.5.3. The Consumption Increased**

The same reason, as in the case of a decrease of consumption, leads to higher consumption in cases of some individuals. Some of those individuals would smoke whenever they had the product available, but were able not to if it was not accessible. These members mentioned increased of consumption (12 references in 9 FGs) usually because of stable supply as it is shown in quotes below:

*"You smoke more because you have it here."*

*"I used to have phases of both smoking and quitting. But since I've been here, I have it easily... Therefore I haven't quit"*

*"Before it was different. If I had some, I smoked. If not, I wouldn't."*

### **3.5.4. Regulated Use**

Regulated use (more responsible use, or rather less excessive use) was stated by participants in some cases (12 references in 9 FGs). The examples below are used as an illustration:

*“Of course before we used to buy 25 grams at once. But now we have 14 weekly. Is that what you mean? To see how it organized us?”*

*“More reasonably, yes. For example, there are people who have been smoking for a long time, I mean they’re older. It also helps the club become more serious, I think”*

### **3.5.5. Regulation of Tobacco Use**

Quitting tobacco, or lowering the tobacco consumption, was reported by some respondents (6 references/4 FGs). Because of a stable supply of cannabis product, many respondents don’t have to use tobacco anymore. One of the reasons is also because they don’t like it, and they used it before to save the material. But mostly because, before entering the CSC, they smoked hashish and it was necessary to mix it. The subsequent quotes are given as an example:

*“I smoke much less. We used to smoke a lot of was hashish before, and this used to give me headaches. Apart from that, you have to use a lot of tobacco with it, and I don’t smoke tobacco. I used to smoke more, and now less.”*

*“I’ve increased the amount of cannabis consumed, but I’ve eliminated the tobacco consumption. I used to smoke a pack and half every day. And, now I only smoke cannabis.”*

*“I’ve increased the cannabis consumption, but have eliminated the tobacco use.”*

*“I quit smoking cigarettes, and I only smoke cannabis, and it’s much regulated. Every day I smoke the same.”*

Using a filter was one of the other mentioned changes of consumption patterns. This participant reported that he learnt in CSC to use a filter and he can't smoke without filters anymore:

*"I used to smoke without a filter. And, now I've learned to smoke with a filter."*

### **3.5.6. Reducing the Risks of Poor Quality**

FG's participants mostly find the quality in CSC as a high level (29 references/13 FGs), better than on the black market. The example is given below:

*"I think it is better. Finally it is association of smokers for smokers. You can tell that those who do it want to give you good quality. Well, the goal is to acquire a good product, and here you get it."*

They often talked about the product being organic, grow product in ecological conditions (6 references/4FGs). This topic was highlighted especially in connection with possible use of fertilizers. The following sentences are used as an example:

*"Here we always do everything organically, that's important. What you consume shouldn't be treated with chemicals. Everything remains natural. We are looking for aromas, flavors. We are trying to satisfy different' tastes. It's like appreciating good wine."*

*"Here we are quite ecological. We treat plants with others plants."*

Some of respondents stated the quality in CSC is sometimes not stable (4 reference/3FGs):

*"From my point of view it is generally very good. But there is one problem, that sometimes, at specific moments, it is not the best. But generally very good."*

According that the quality depends on the cultivator:

*"Depends on who cultivates it and the hand he has. One which arrives is good, the other is bad. And it depends how you treat it and how you harvest it."*

Two different statements were made about the possibility of mold contamination within CSC:

*“Here is one problem, that they can sell you the plant with fungi. But it is not actually so common.”*

*“I don’t think that any association would sell you the marijuana with fungi. I think they do not accept this.”*

As participants claimed that their CSC is mostly organic as much as possible just in one case the problem with fertilizers was mention:

***„Q: Considering the quality of marijuana don’t you have problems with fertilizers for example?***

*R1: Yes, sometimes.*

*R2: This depends on the cultivator and the product. “*

### **3.5.7. Quality Control within CSC**

From FGs participants statements is clear that there is no unified system of quality control implemented within CSCs. Speaking of quality controls in CSC (67 references /13 FGs) some of them do some chemical analysis occasionally, usually during some special occasion as for example competitions. Some of them would like to do it in future. The reason why they don’t do analysis regularly could be the high cost. If they do analysis they look for THC. CBD content or the purity. The situations illustrated with the following examples:

*“When it’s possible, we analyze the fertilizers to make sure they don’t contain any chemicals.”*

*“Yes, you can find it between 20 and 50 euros.”*

***“Q: And do you make any quality tests of the cannabis?***

*R2: Yes, they bring us analysis from the university in Barcelona[10][11]*

***Q: And what was the result of the analysis?***

*R2: If you like, I will bring you some examples so you can see. Well, to show you that they are free of molds.”*

Besides the analysis participants were also asked if they visited or could visited the cultivation (67 references / 12 FGs). The reasons was to realize if they are aware of the cultivation process conditions and they can possibly control it. They were also asked if there is any certificate of quality. Part of the respondents stated that they can visit cultivation if they want (4 references / 3 FGs), some said they could, but they did not do so (2 references / 1 FGs) or that just some members can (5 references / 3 FGs). However most of the participants claimed that they can't visit the cultivation (21 references / 8 FGs). Mostly from security reasons. They understand that and some as is proven in the next example:

*“No, once a year we have a meeting and we say: Well, we are going to plant ten and they are going to be planted at one place. Do you want to know the place? And we say: No. Therefore they are planted at that place and it is documented. It is written in our papers, where the cultivation is and everything. But we say: Do you want to know the place? And we say: No.”*

They sometimes also mention that they trust the CSC:

*“Normally I don't do it, because I trust them completely.”*

FGs' respondents fully respect this rule and the fact that usually only people involved in cultivation can visit it. CSC on the other hand sometimes provide their members with a picture from the cultivation. In some cases the cultivation can't be visited because it is not CSC's property, but cultivator's.

The reason to keep cultivation secure is possible risk of police confiscation or robbery as is proven in next quotes:

***“Q: Have you ever been robbed?”***

*R: Yes, they have robbed us before and later we had two more intended robberies.”*

*“Ultimately, we have had police interventions in the majority of cultivations. And we have 2 cultivations running. This year it's very unstable.”*

Participants talked about the cultivation process and they think they are quite informed about the procedure. Because some of them also cultivated in the past, they are quite familiar with the way cannabis is cultivated. However some of them would like to visit the cultivation purely to compare with their own:

*“It is very important to compare your own cultivation with the big one. I understand here it is not possible from security reasons.”*

Although there is no any particular quality assurance system implemented yet participants have their own way to identify the quality of the product (339 references / 13 FGs) based on its appearance (40 references/ 10 FGs), aroma (22 references / 10 FGs), flavor (25 references / 11 FGs), effect (19 references / 9 FGs), impact on health (12 references / 7 FGs) or they decided according information what they are provided with (35 references / 9FGs). The example is in the following statement:

*“The quality, visually you already have some clue. And according to aroma as well. And, later there are magnifiers that we can observe and do experiments with.”*

As is obvious from quotes below FGs participants think that they are able to recognize if the plant was treated with fertilizers or chemicals in general (13 references /7 FGs) or if it contains fungi (5 references / 2 FGs):

***“Q: And can you tell when you smoke anything that has fertilizers in it?”***

*R: In the end you can recognize it based on the taste, as well as the way it makes you feel. The effects aren’t the same. There are days where you may cough a lot. Here we are used to it. It’s been a while when we last smoked something like that, but we can tell.”*

*“It also cause changes of the smoke and of the ash”*

As is stated in the following example In case that member is not satisfied with the product they say it is possible to give it back as mention in the further statement:

*„In the black market, if you don’t like what they’ve given you, there isn’t a refund. Here, if they bring us marijuana that we don’t like, we can get our money back.”*

### 3.6. Social Impact of CSCs

FGs' discussion about the black market (694 references in all 14 FGs) covered mainly the area of how it has changed since CSCs exist (225 references in 13 FGs) from participants' point of view. It also contained the theme of how the product was obtained on the black market (162 references in 14 FGs). Moreover, Respondents talked about the quality of the product outside the CSCs (38 references in 11 FGs) and hashish in general on the black market (23 references/8FGs).

#### 3.6.1. Shift from Illegal Market Acquisitions and Related Risks

According to the respondents, the problem of the black market is the quality or insecurity of the quality of the product. In the case of hashish, it is also the possible risk of product adulteration. Some participants think that cannabis is less likely to be adulterated compared to hashish as is mention in the following quote:

*"The hashish and marijuana markets are very different. In the hashish market, you don't know who's made it. In the marijuana one, you realize that some neighbor has cultivated it."*

Besides the low quality of the product in general, the risk of being cheated is also present. Some respondents mentioned that compared to CSCs, there are no varieties to choose from and they must accept what is offered. The majority of those who reflect the price think it is cheaper in CSCs, especially when compared to street-level transactions to which they had to resort if their stable source was not available. The following example illustrates the risks of price and quality ratio from participants' experiences:

*"It's more expensive on the black market."*

*"That's the experience. You risk that they give you bad quality and a high price in the black market."*

*“The other day they offered me less than 6 grams for 50 euros. It was like caramel.”*

Respondents also experienced negative health effects (mainly headache, cough, stomach pain) when they used products from the black market (5 references in 3 FGs) or unknown quality. They frequently mentioned a negative impact of hashish. The following sentences demonstrate participants’ experiences with negative health effects of drugs they used to obtain on the black market:

*“I did. When I bought hashish from the black market I used to get a lot of stomach aches and I had a lot of problems. And when I got here and consumed this quality I didn’t have the problems that I used to have. I didn’t vomit or have any pain. Nor the headaches what I already mentioned.”*

*“Before, it was headaches with hashish”*

*“I began to cultivate cannabis because when we used to smoke hashish there was one time when a portion came with part of rabbit feces, and it passed an infection that affected some people. I noticed it because it gave me stomach acids as well as to my partner. Therefore we began to cultivate our own.”*

The difference between hashish and marijuana was also discussed.

### **3.6.2. CSC Compared to Black Market**

Respondents also compared the black market with CSCs (18 references/8FGs). They highlighted the security they have in CSC compared to the black market in terms of fixed opening hours, easy access to product, and especially having all the information about the product and its quality. According to some respondents, the quality in CSC’s is higher than on the black market. On the other hand some of them mentioned that even on the black market, good quality can be found. But, the problem is that it is not guaranteed. The subsequent parts of FGs are used as an example:

*“But, in the end, they cannot compete with the quality. Here, everything is better quality.”*



*“And what’s more important is that you know you have a schedule, like a shop that is open every day, easier and safer. You know you are going to have it for sure.”*

*“Here, if you want, you can get it fast and you don’t have to depend on anybody. And, here you can choose.”*

Participants also mentioned there is no possibility to choose particular varieties on the black market. The importance of a broad spectrum of varieties is that they can pick the one which fits them the best and so eliminate the negative effects. The following sentence demonstrates that CSCs provide information and also a broader scope of varieties:

*“...There, you didn’t get a varieties, only what they had. Here, you come to buy and have all kinds of information about what you are going to smoke.”*

There were also notes of easier access to drugs in general on the black market. So there could be the risk of using other substances, apart from cannabis, when obtaining cannabis on the black market. Next statements are used as an illustration:

*“Now it’s easier. You can buy all kinds of drugs.”*

***“Q: There’s more variety? In what way?”***

*R: Drugs in general, all kinds, not just weed.”*

Since the CSCs set the age limits for their members (usually 18, 21 or 23 years) the black market is the only place where minors can obtain cannabis (3 references/3FGs). All three mentions about the black market being accessible to minors are shown below:

*“I see the black market with teenagers. I suppose that they cannot join a club, and this market is for them.”*

*“The entire black market is open to all ages. The only thing they care about is money. On the street they’ll sell to anyone.”*

*“The black market on the street lowered. The consumer younger than 18 years cannot join the clubs that’s why it makes a sense for them to obtain on the black market.”*

### 3.6.3. Police

The black market is generally associated with the risk of police interventions, fines and arrests (32 references / 8 FGs). Considering the police, respondents mostly talked about the risk of being caught or fined by police, an example is given below:

***“Q: Did you have problems with the police?”***

*R: Yes, in general*

***Q: Can you explain?***

*R: You go through the streets with a beer. They detain and fine you for drinking a beer on the street. They search you and find marijuana or hashish and, police tell you, ‘go to a club that will remove the fine.’*

***Q: Did they tell you?***

*R: Yes, when we were drinking a beer, they stopped us for it. You pay the fine for the beer and later the hashish.”*

***“Q: How many times did they fine you for that?”***

*R: They have searched me many times for that, but I have never been fined.*

***Q: How many times have the police stopped you for smoking?***

*R: 5-7 times. The last time was two years ago.*

***Q: How many times have they fined you?***

*R: Mostly, they will stop you rather than fine you.*

***Q: When they stop you and take your cannabis, is there some sort of protocol?***

*R: It depends. Sometimes they make you throw it away. Other times they just take it.”*

One of the risks is smoking in a public place, which is not allowed in Spain. This risk quite lowered since CSCs existed and members can peacefully smoke inside without the risk of being caught for public consumption. However another issue arose with the possibility to acquire the cannabis in the club and take it home. Although obtaining cannabis in the club is allowed, members can be caught outside while carrying it home. The legal insecurities were often mentioned (53 references /11 FGs). This unconsidered issue is illustrated in the following statements:

*“We have a major problem. We can come here to consume it, but if we want to take 3 grams with us to consume at home, once we leave out that door and go on the street,*

*we are delinquents. We would be doing something illegal. And, the police could confiscate and take it away.”*

*“The example that I’m giving you, that you could consume it here but if you have to leave to go somewhere and the police stop you, can get you in trouble. They fine you 1000 euros. So, yes - you can do it but with certain limitations.”*

The risk increases especially if they withdraw a higher amount - for example a week or month quota - although members carry their CSC membership card with them. That’s why some clubs adopted the limits to prevent their members of being suspected of trafficking intentions, as we can see in the example below:

*“It’s because we have the police all over us and if they stop one of the members with more than 3 grams it’s a problem. We used to do it. We used to dispense a week’s worth, it was the maximum. For a member with 15 grams it’s easily understood that it cannot be used to be sold. If you give them just 3 grams a day, they understand what it’s for.”*

A different issue is testing the drivers. Some participants complained that although they keep the rule of not using before driving, the test is positive and they can be punished as is demonstrated in the quotes below:

*“R1: And more than anything, it’s because the police control a lot; there are check-points in the highway. And it doesn’t matter if you haven’t smoked in the last 48 hours, the test will be positive*

*R2: If you consumed yesterday and they stopped you today in the afternoon, it will give you a positive result and they will fine you or detain your car like a drunk who cannot drive. It’s an injustice.”*

#### **3.6.4. Risks to Safety**

During the interview participants were also ask if they experienced any dangerous situation while obtaining the drug outside the CSC. Some cases of robbery were discussed, but apart the risk of being cheated, fined by police or bought bad quality any particular risk wasn’t significantly mentioned. Some example of bad experiences are shown here:

*“Once I entered a bar to buy and I end up without money and without hashish. They took my money and hashish from my wallet.”*

*“One of the experiences - one day when I was leaving a disco club, I went to ask a gypsy for hashish and he wanted to attack me, another gypsy intervened and saved me. Things like that have happened to me but nothing dangerous. “*

*“If you are unaware, you have a 50% chance that they will cheat you. That happens a lot of people that they are given another thing.”*

However participants finds more risky the quality of the product on the black market, its potential adulteration, obtaining smaller amount than they paid for or being approached by police and fined:

*“It depends on the places you go to. But in the end you will have more troubles with the police than with the dealers.”*

Part of participants reported that they are not operating on the black market anymore or at least less. Since they are members of CSC they are not aware about the situation (10 references/9FGs), what is demonstrated in following samples:

*“Since I am here I hasn’t bought anything outside”*

*“Since I’ve been here I haven’t bought anything to smoke anywhere else. Only here. Or I share with a friend. But, the black market is over for me.”*

*“As we are in the association, I don’t already know about it”*

Respondents discussed how prices on the black market changed as consequence of CSC (69 references/7FGs). Due to their opinion they mostly decreased (13 references /5 FGs) as seen in the next quote:

*„Because of us the black market has lowered prices. “*

During FGs participants also described the way they obtained the product outside the CSC and risks arising from that (162 references/14 FGs). Most of them obtained cannabis or hashish through their friends (14 references/9FGs) or via networking (13 references/5FGs) what means that they contacted “someone who could possibly know someone who sell cannabis”. The other most common solution is to just go to

some place (streets) where potential dealers could be (8references/5FGs) or to cultivate on their own (7references/5FGs). A few participants mentioned to go to the bar (4 references/3FGs), to call someone (4references/4FGs) or to have one stable supplier (1 reference/1 FG). Some examples are shown here:

*“Before the time of the club, I used to cultivate. And, before that... well, there was always a friend who had some.”*

*“To go to a friend’s place to pick up and leave.”*

*“By different ways. Through a friend, own cultivation, mouth by mouth, friend who knows a friend, and so on.”*

Besides the risk of being cheated, buy the bad quality, be caught by police or fined participants also talked about the fact that obtaining the product on the black market is time consuming. It also cost them money to call people who could sell them cannabis or to pay for petrol to visit a person who sells cannabis with a car. Call someone could according to one participant also increased the risk of being caught. The examples demonstrating these opinions are pasted below:

*“In my case, in the black market I have a lot to do, such as making 4 calls. And you are risking, because it is not safe to talk to certain people via phone.”*

*“Yes, basically. And now you spend less for petrol, spend less for phone calls. You save the money!! And I used to cough a lot, now I cough much less.”*

### **3.6.5. How has the Black Market Changed?**

Part of FGs covering the black market topic included also the questions about how did the black market changed, according them, since CSCs exist (225 references/14FGs). Most of the participants think that black market decreased (18 references/8FGs) because many CSC exist, they offer better quality and price and as already mention before according to FGs participants is much easier and more secure to obtain cannabis in CSC. Some examples are shown below:

*“The black market decreased a lot. Many people don’t go there anymore. Because of the quality, the price, everything”*

*“The consumption in parks and public places reduced a lot. It is more noticeable in smaller cities. The market decreased.”*

*“They have lost a lot of clients. They have to raise the quality and lower the price. Now in Barcelona, those who deal have it tough because there are a lot of associations.”*

*“The black market has decreased. I know people who used to sell and they stopped because there are not many people.”*

Some respondents noticed some changes of the black market (14 references/5FGs) as it is presented in the example below:

*“It’s true for the smokers that the market has evolved. The cigarette butts and filters - things that used to be around, but I don’t know now - it wasn’t so extensive.”*

Just a few of respondents think it increased or at least developed (8 references/3 FGs), like proven in the next statement:

***“Q: My last question is how did the market change in the last years?”***

*R: Every time there are more cultivators.”*

### **3.6.6. Hashish**

The black market with hashish is a specific topic. It has changed as people entered the associations, and according to some participants there is a less hashish consumption in general (6 references / 5FGs). Although it is possible to obtain hashish in CSC it is not so dominant, because it is easier to obtain marijuana and so some respondents lowered or quit their own hashish consumption (7references / 5 FGs) and they rather smoke marijuana now, as for example shown in the phrase below:

*“There are a lot of people who have passed on from hashish to marijuana.”*

According to them the hashish is mostly reachable on the black market. The following quote are an example:

*“Before in the club we used to have hashish. We used to make a little bit of it, the rest we would buy. But, ever since the police came, we prefer not to have it just in case.”*

*“Yes, the Moroccan hashish only on the black market”*

*“The major problem is smoking hashish. I love to smoke double O, like in Amsterdam. Smoking oils is annoying. And you cannot get hashish here. It’s in the black market, if not there, impossible.”*

*“Normally you can find only hashish on the black market”*

## 4. Discussion

The main purpose of CSCs is to provide their members with cannabis for their own consumption at a given fee. To become a member a certain age limit must be reached, mostly the age of 18, 21 or 23 years. The amount distributed is set in advance within specific limits and adjusted to the individual's needs. However, the acquired amount can't be higher than the upper limit. The frequency of product acquisition varies. Members can't trade the cannabis any further, which they could be expelled for doing. CSCs can intervene in case of overuse or emerging mental health issues. The time spent in CSCs differs from member to member. Some of them visit the club on a daily basis and spent some time there, some of them only pick up the product. CSCs offer many activities and variable social interaction, which is a quite distinctive feature of CSCs.

Membership has various benefits for the members. The social aspect of CSC's, which was already mentioned, was one of the most discussed benefits. Part of that was the avoidance of being stigmatized and to obtain cannabis in a legal manner. Moreover, clubs allow their members to smoke peacefully without the fear of being caught by police and fined. The product within CSCs is usually of a higher quality than on the black market and complemented with information about its content and possible purpose. There is also a broad offer of cannabis varieties. Respondents talked about the comfort and security that they feel, because they don't have to worry about obtaining cannabis. They know that there they have a secured supply. Some of the participants become members purely for medical reasons. On the contrary, some cannabis smokers don't want to join the club. According to FGs' participants some arguments not to join were lack of information, fear from police or stigmatization, or having their own cultivation.

CSCs have an impact on an individual's risk connected to cannabis use, such as the change of consumption patterns. Respondents mentioned the regulated use they adopted since they became members. The majority of them claimed a consumption decrease; some of them quit tobacco and some quit or lowered the hashish consumption in favor of marijuana, because it is easier to obtain. Several participants stated that the consumption is equal or even higher than before CSCs.

The social impact of the membership is dominantly connected to avoidance of the black market, which reduces the risk of consumption of adulterated or



contaminated drugs, or being cheated. Besides that, it minimizes the risk of police arrest or fines. The price of cannabis is usually higher on the black market, so the expenses are decreased as well. CSCs seek the quality assurance system for their product. In some cases they do laboratory analysis of the content and members are generally satisfied with the provided quality.

According to results members of CSC who participate in focus groups did change their consumption patterns of cannabis use. The interviews revealed that they adopted a more responsible use and were generally satisfied with the quality of product which the CSC provides them with. Because of that, they can avoid the black market which they find risky mostly in terms of product quality. The majority of participants lowered their cannabis consumption because they feel secure. The reason is that the CSC provided them with a stable supply and they don't feel anxious about possible unavailability of the drug. Those who talked about the effect CSC had on them, would buy and afterwards consume rather more substance in the past just to be sure to have it when they needed it. However, a few participants mentioned the increase of consumption based on the same principle. They have a stable supply of cannabis, and so they smoke constantly. These participants' pattern of behavior was different in the past - if they did not have the cannabis, they did not smoke it. If they had it, they smoked it. This different experience of CSC's effect is probably based on the various members profile and deserve further research.

According to respondents, CSCs offer higher quality compared to the black market. They frequently talked about the risk of being cheated when obtaining the drug on the black market, or getting adulterated drugs, especially in case of hashish. These statements supported previous research on risks of cannabis adulteration (Exley et al., 2006; Busse et al., 2008; Cole et al., 2010).

Focus group respondents described quality assurance (QA) systems implemented within CSCs. In some cases, samples are sent to laboratories to obtain the results of their purity, THC and CBD content or to make sure there are no fungi. Laboratory tests and QA minimize the risk of fungi presence in the product as it can happen on the black market (Kurup et al. 1983). Several participants said that CSCs usually grow plants in ecological conditions without the use of chemical fertilizers that eliminate the possible use of products with some chemical residues as was (for example) found by a study testing the cannabis from the black market (Schneider, Bebing and Dauberschmidt, 2013). However, the quality assurance system is not

unified across different CSCs yet, mostly because the analysis is quite expensive and for some CSCs it is not affordable. There is clear intention to implement the standardized quality control system with analysis of sample included within CSCs (FAC, 2010; FAC, 2013). Although these findings prove that CSCs have a significant impact on product quality, it is not comparable to pharmaceutical standards. Arno Hazekamp (2006) compared the cannabis from Dutch coffee shops with the pharmaceutical product from Bedrocan, and he proved the quality is not equal, and the non-pharmaceutical cannabis could be hazardous, especially if used by people who already have some health issues. As some participants mentioned people who are members purely for medical reasons, the role of CSCs in medical marijuana supply is then disputable. On one hand it is apparently better than the black market, on the other hand the product doesn't meet any particular criteria of quality, and so its use can bear certain risks.

Besides the benefits connected to cannabis use itself, CSCs have a significant social aspect for their members. That shows that CSCs don't only provide their members with cannabis and service related to it, but also have a quite sensible added value. It is about being part of the large group, participating in activities of the community as for example competitions, workshops, games, etc. Moreover it helps to support legislative changes and promote the movement. This is probably one of the reasons why CSCs are also attended by nonsmokers and are generally popular in Spain.

The daily use of cannabis can increase the risk of further development of addiction (Anthony, 2006; Hall & Fischer, 2010). However, respondents did not talk about the potential risk of cannabis addiction. Although participants talked about the use limits and certain CSCs' control over the consumed quantities, no case or risk of cannabis addiction was mentioned. This could indicate that a CSC doesn't substitute any therapeutic facility, although is able to intervene in case of hazardous use as proven in the example of a member with the psychotic attack. That finding corresponded to suggestions of harm reduction strategies for cannabis use, which find it crucial to provide intervention in case of an emerging psychotic disease and encourage the person to quit or at least lower the consumption (Hall & Fischer, 2010).

From participants' point of view, CSCs allow for peaceful consumption of drugs. Therefore, members can avoid the risk of being caught by police when

smoking in public, which is mentioned as a social risk reducing activity (Swift et al., 2000). However, CSCs' members still face the risk of being detained by police when they carry their part of the consumption with them.

The benefits of providing information was very noticeably perceived by study participants. The scope of information discussed was general information about cannabis and specific information about the product that is acquired and consumed. CSCs provide information about the quality of the product, and as mentioned above, about the chemical content in some cases. Besides information, CSCs also offer different varieties of cannabis. Both, information and different types of varieties, help consumers to reduce negative effects of the cannabis use, because they can decide which product is the most suitable for their purposes.

It is necessary to draw attention to the likely bias of the results, given the fact that focus groups' participants were questioned with a semi-structured interview. Although all focus groups were moderated by only one interviewer, the questions asked were adjusted based on the personal judgement and so could cause subjective bias.

As one of the motivations to join the club is activism, data could be distorted by the participants' effort to emphasize the positive aspects of the club. That is why part of the benefits were accepted, but further more concrete questions were asked by the mediator with the aim to obtain objective information about the issue.

## **5. Conclusion**

CSCs, through the means of shared cultivation, provide supply of cannabis to regular adult users. Therefore members do not have to obtain cannabis on the black market, which is often associated with social and health risks. Members can consume cannabis within the club, thus they avoid public consumption and the possible risk of further legal consequences. Members are provided with a lot of information about the product, hence they can make an informed decision about their own consumption. Limits of use set by the clubs help members regulate and better organize their own consumption. Clubs seek to ensure product quality and inform their members about it. Some of them even provide their members with results of chemical analysis. Apart from activities connected to cannabis use, CSCs have a noticeable social aspect and they also intend to support the legislation changes.

Research findings revealed that CSCs have a considerable impact on changing users' behavior. CSCs reduce the potential risks associated with the use of cannabis from the black market especially by providing information, certain product quality, and stable supply. Moreover, clubs can minimize the related legal risks, for example the police arrests and fines. It is important to point out that CSCs do not substitute any therapeutic facilities, although they are able to intervene in instances of hazardous use. As for the regulatory role, CSCs may prove to be a promising alternative.

This research achieved the set goals and the used method provided relevant data that allowed the research questions to be sufficiently answered. However, further research on particular topics suggested in discussion of this work is necessary.

## **6. Sources**

Abrams, D., I., Vizoso, H., P., Shade, S., B., Jay, C., Kelly, M., E., Benowitz, N., L., (2007). Vaporization as a smokeless cannabis delivery system: a pilot study. *Clin Pharmacol Ther.* 82 (5): 572-8.

Anthony, J. C., (2006), 'The epidemiology of cannabis dependence', in Roffman, R. A. and Stephens, R. S. (eds), Cannabis dependence: its nature, consequences and treatment, Cambridge University Press, Cambridge, UK: 58–105.

Anthony, J. C., Warner, L. and Kessler, R. (1994), 'Comparative epidemiology of dependence on tobacco, alcohol, controlled substances and inhalants: basic findings from the National Comorbidity Survey', Experimental and Clinical Psychopharmacology 2: 244–68.

Arseneault, L., Cannon, M., Poulton, R., Murray, R., Caspi, R., & Moffitt, A., (2002). Cannabis use in adolescence and risk for adult psychosis: Longitudinal prospective study. British Medical Journal, 325: 1195-1199.

Azorlosa, J. L., Greenwald, M. K., & Stitzer, M. L. (1995). Marijuana smoking: effects of varying puff volume and breathhold duration. Journal of Pharmacology and Experimental Therapeutics, 272 (2): 560-569.

B.O.E., (2004). Lista de plantas cuya venta al público queda prohibida o restringida por razones de su toxicidad. (B.O.E., núm. 32, viernes 6 febrero 2004). From <http://www.iqb.es/leyes/boe-lista-plantas-prohibidas-6f.pdf>

Barriuso, M., (2012). Ni prohibición ni mercantilización: Buscando el equilibrio en la regulación legal del cannabis. In Cannabis: usos, seguridad jurídica y políticas: 167-182.

Barriuso, M., (2005). Propuesta de modelo legal para el cannabis en el estado español, Eguzkilore, Revista del Instituto Vasco de Criminología, vol. 19: 151-167. From: <http://www.druglawreform.info/en/issues/regulation/item/656-propuesta-demodelo-legal-para-el-cannabis-en-el-estadoespanol>

Barriuso, M., (2011). Cannabis social clubs in Spain. A normalizing alternative underway. Series on Legislative Reform of Drug Policies Nr. 9, January 2011.

Bečková, I., & Višňovský, P. (1999). Farmakologie drogových závislostí 1. vyd. Praha: Karolinum. ISBN 80-7184-864-6.

Bewley-Taylor, D., Blickman, T., Jelsma, M., (2014). The Rise and Decline of Cannabis Prohibition the History of cannabis in the UN drug control system and options for reform. Research Institute for Arts and Humanities, Swansea.

Breakey, W., R., Goodell, H., Lorenz, P., C., McHugh, P., R., (1974). Hallucinogenic drugs as precipitants of schizophrenia. Psychol Med 1974; 4: 255-61.

Budney, A. J., (2006), 'Are specific dependence criteria necessary for different substances: how can research on cannabis inform this issue?', Addiction 101 (Supplement 1): 125–33.

Busse, F., Omid, L., Timper, K., Leichtle, A., Windgassen, M., Kluge, E. & Stumvoll, M., (2008). Lead poisoning due to adulterated marijuana. New England Journal of Medicine, 358 (15): 1641-1642.

Butler, M., (2007), 'Australia's approach to drugs and driving', Of Substance: The National Magazine on Alcohol, Tobacco, and Other Drugs 5: 24–6.

Canafac, (2015). Retrieved April 23, 2015. From <http://canafac.org/>

CatFAC, (2015). Cannabis, Catalunya. Retrieved April 23, 2015. From <http://catfac.org/>

Cole, C., Jones, L., McVeigh, J., Kicman, A., Syed, Q., Bellis, M., (2010). CUT: A Guide to the Adulterants, Bulking agents and other Contaminants found in illicit drugs. Centre for Public Health Faculty of Health and Applied Social Sciences Liverpool John Moores University. ISBN: 978-1-907441-48-6 (pdf). From: <http://www.cph.org.uk/wp-content/uploads/2012/08/cut-a-guide-to-the-adulterants-bulking-agents-and-other-contaminants-found-in-illicit-drugs.pdf>

Corbin, J., & Strauss, A., (1990). Grounded Theory Research: Procedures, Canons, And Evaluative Criteria. *Qualitative Sociology*: 3-21.

Decorte, T., (2014a). Cannabis social clubs in Belgium: recent developments. 8th Annual Conference of the International Society for the Study of Drug Policy. Gent. From <https://biblio.ugent.be/input/download?func=downloadFile&recordId=4426696&fileId=4426702>

Decorte, T., (2014b). Cannabis social clubs in Belgium: Organizational strengths and weaknesses, and threats to the model. *International Journal of Drug Policy*. From <http://dx.doi.org/10.1016/j.drugpo.2014.07.016>

Degenhardt, L., & Hall, W., (2006). Is Cannabis Use a Contributory Cause of Psychosis? *Canadian Journal of Psychiatry*, 51 (9): 556-565.

Degenhardt, L., Hall, W. D. and Lynskey, M. T., (2001), 'The relationship between cannabis use, depression and anxiety among Australian adults: findings from the National Survey of Mental Health and Well-being', *Social Psychiatry and Psychiatric Epidemiology* 36: 219–27.

Donnelly, N., Hall, W., Christie, P., (1999). The effects of the CEN scheme on levels and patterns of cannabis use in South Australia: evidence from National Drug Strategy Household Surveys 1985-1995. Canberra: Commonwealth Department of Health and Family Services.

D'Souza, D., Perry, E., MacDougall, L., Ammerman, Y., Cooper, T., Wu, Y., Krystal, J., (2004). The Psychotomimetic Effects Of Intravenous Delta-9-Tetrahydrocannabinol In Healthy Individuals: Implications For Psychosis. *Neuropsychopharmacology*, 29: 1558-1572.

Dupal, L. (1994). *Kniha o marihuaně: kompilace*. Maťa.

EDADES, (2013). Encuesta Sobre Alcohol y Drogas en Población General en España. EDADES 2011-2012. Ministerio de Sanidad, Servicios Sociales e Igualdad, Gobierno para el Plan Nacional sobre Drogas Madrid, 22 de enero de 2013. From <http://www.pnsd.msc.es/Categoria2/observa/pdf/EDADES2011.pdf>

EMCDDA, (2011). Annual report 2011: The state of the drugs problem in Europe Cannabis. Published on November 15th 2011. Retrieved November 21, 2014. From <http://www.emcdda.europa.eu/online/annual-report/2011/cannabis/3>

EMCDDA, (2014). Country overview: Spain. Retrieved November 21, 2014. From <http://www.emcdda.europa.eu/publications/country-overviews/es>

ENODC, (2015). Ehkeef. Retrieved April 23, 2015. From <http://www.encod.org/info/Ehkeef.html>

Erkelens, J., L., Hazekamp, A., (2014). That which we call Indica, by any other name would smell as sweet. Cannabinoids 2014;9 (1): 9-15.

ESTUDES, (2014). ESTUDES 2012/2013. Observatorio Español sobre Drogas. DGPNSD. MSSSI. Retrieved on 21st November 2014. From [http://www.pnsd.msc.es/Categoria2/observa/pdf/PresentESTUDES2012\\_2013.pdf](http://www.pnsd.msc.es/Categoria2/observa/pdf/PresentESTUDES2012_2013.pdf)

EUSFAC, (2015). Federación Vasca de Cannabis. Retrieved April 23, 2015. From <http://eusfac.org/>

Exley, C., Begum, A., Woolley, M. P., & Bloor, R. N., (2006). Aluminum in tobacco and cannabis and smoking-related disease. The American journal of medicine, 119 (3): 276-e9.

FAC, (2010). Cómo crear un Club Social de Cannabis. Guía legal y práctica para la puesta en marcha de un cultivo asociativo. Federación de Asociaciones Cannábicas – FAC. Sevilla.

FAC, (2013). Comisión Técnica de Control y Calidad. Federación de Asociaciones Cannábicas.



FAC, (2014). Federados (online). Retrieved November 14, 2014. From <http://www.fac.cc/federados/>

FEDCAC. (2015). Retrieved April 23, 2015. From <http://fedcac.org/>

Fergusson, D., Horwood, L., Swain-Campbell, N., (2003). Cannabis Dependence And Psychotic Symptoms In Young People. *Psychological Medicine*, 33: 15–21.

Fišar, Z., (2008). Souborné referáty. Kanabinoidy a duševní poruchy. *Čes. a slov. Psychiatrie*, 104 (6): 297–307.

Freedom Seeds, (2014). Indica vs Sativa - What's the difference? (2014, September 2). Retrieved April 23, 2015. From <http://freedomseeds.com/blog/2014/09/indica-vs-sativa>

Gabrielová, H., Ruman, M., (2008). Botanika konopí. In Miovský, M. et al., (2008), *Konopí a konopné drogy. Adiktologické kompendium*. Grada Publishing, a. s. Praha.

Gowing, L., R., Ali, R., L., White, M., J., (2000). Respiratory harms of smoked cannabis. Drug and Alcohol Services Council. ISBN 0-7308-6227-5.

Grotenhermen, F., (2004). Pharmacology of cannabinoids. *Neuroendocrinology Letters*, 25 (1/2): 14-23.

Hall, W., Fischer, B., (2010). Harm reduction policies for cannabis in Rhodes, T., *Harm reduction: Evidence, impacts and challenges EMCDDA monographs*. Luxembourg: Publications Office.

Hall, W. D., Pacula, R. L., (2003), *Cannabis use and dependence: public health and public policy*, Cambridge University Press, Cambridge, UK.

Hall, W. D., Degenhardt, L. and Patton, G. C., (2008), 'Cannabis abuse and dependence', in Essau, C. A. (ed.), Adolescent addiction: epidemiology, treatment and assessment, Academic Press, London: 117–48.

Hall, W., & Solowij, N., (1998). Adverse Effects Of Cannabis. The Lancet, 352: 1611-1616.

Hazekamp, A., Ruhaak, R., Zuurman, L., van Gerven, J., Verpoorte, R., (2005). Evaluation of a Vaporizing Device (Volcano1) for the Pulmonary Administration of Tetrahydrocannabinol. Journal of Pharmaceutical Sciences, Vol. 95: 1308–1317.

Hazekamp, A., (2006). An evaluation of the quality of medicinal grade cannabis in the Netherlands. Cannabinoids, 1 (1): 1-9.

Herrero-Alvarez, S. (2000). El cannabis y sus derivados en el derecho penal español. Adicciones, 12: 315-329.

Hoffmann, D., Brunnemann, K. D., Gori, G. B., & Wynder, E. L. (1975). On the carcinogenicity of marijuana smoke. In Recent Advances in Phytochemistry: 63-81.

Hrdina, P., (2003). Harm Reduction - snižování poškození drogami. In Kalina, K., (2003), Drogy a drogové závislosti: Mezioborový přístup (1. vyd. ed.). Praha: Úřad vlády České republiky.

Huber, G., L., First, M., W., Grubner, O., (1991). Marijuana and tobacco smoke gas-phase cytotoxins. Pharmacology Biochemistry and Behavior 40: 629–636.

INE, (2014a). Instituto Nacional de Estadística. Population Figures at 1 January 2014. Migration Statistics 2013 (online). Press release. From [http://www.ine.es/en/prensa/np854\\_en.pdf](http://www.ine.es/en/prensa/np854_en.pdf)

INE, (2014b). Instituto Nacional de Estadística. Regional Gross Domestic Product Year 2013 (online). Spanish Regional Accounts. Base 2008 (NAS-2008). From [http://www.ine.es/en/prensa/np835\\_en.pdf](http://www.ine.es/en/prensa/np835_en.pdf)

Kurup, V., Resnick, A., Kagen, S., Cohen, S., Fink, J., (1983). Allergenic fungi and actinomycetes in smoking materials and their health implications. *Mycopathologia*, 82 (1): 61-64.

Laumon, B., Gadegbeku, B., Martin, J. L., Biecheler, M. B., (2005). Cannabis intoxication and fatal road crashes in France: population based case-control study. *Bmj*, 331(7529): 1371.

Lenton, S., Ferrante, A., Loh, N., (1996). Dope busts in the West: Minor cannabis offences in the Western Australian criminal justice system. *Drug and alcohol review*, 15 (4): 335-341.

Lenton, C., Heemeniuk, B., National Drug Strategy Committee, (2005). Infringement versus conviction: the social impact of a minor cannabis offence under a civil penalties system and strict prohibition in two Australian states: Monograph no. 36.

Lenton, S., Bennett, M., Heale, P., (1999). The social impact of a minor cannabis offence under strict prohibition: the case of Western Australia: 1-229.

Ley Orgánica 1/1992, de 21 de febrero, Sobre Protección de la Seguridad Ciudadana, (1992). From <https://www.boe.es/buscar/act.php?id=BOE-A-1992-4252>

Ley Orgánica 10/1995, de 23 de noviembre, del Código Penal, (1995). From [http://noticias.juridicas.com/base\\_datos/Penal/lo10-1995.l2t17.html](http://noticias.juridicas.com/base_datos/Penal/lo10-1995.l2t17.html)

Maftai, L., (2012). Illegal Drug Markets in Europe: the Negative Consequences of Globalization. Center for European Studies. IV, (2), 2012. Available at: [http://ceswp.uaic.ro/articles/CESWP2012\\_IV2\\_MAF.pdf](http://ceswp.uaic.ro/articles/CESWP2012_IV2_MAF.pdf)

Marks, A., (2015). The Legal Landscape for Cannabis Social Clubs in Spain. A Preliminary Sketch of the Legal Landscape for Cannabis Social Clubs in Spain (2015). Observatorio Civil de Drogas. Available at:

<http://www.law.qmul.ac.uk/docs/staff/departments/148791.pdf>

Marlatt, A., Witkiewitz, K., (2002). Harm reduction approaches to alcohol use: Health promotion, prevention, and treatment. Addictive Behaviors, 27 (2002): 867–886. From

<http://www.doctordeluca.com/Library/AbstinenceHR/HRforAlcProbs02.pdf>

McLaren, J., Swift, W., Dillon, P., Allsop, S., (2008). Cannabis Potency And Contamination: A Review Of The Literature. Addiction: 1100-1109.

Mechoulam, R., Hanuš, L. (2000). A historical overview of chemical research on cannabinoids. Chemistry and physics of lipids, 108(1): 1-13.

Mechoulam, R., Hanus, L., (2002). Cannabidiol: an overview of some chemical and pharmacological aspects. Part I: chemical aspects. Chem Phys Lipids 121: 35-43.

Miovský, M. (2006). Kvantitativní přístup a metody psychologického výzkumu. Praha: Grada publishing, a.s.

Miovský, M., Gabrhelík, R., Vacek, J., Hanuš, L., O., (2008). Historie užívání konopí a konopných drog. In Miovský, M. et al. Konopí a konopné drogy. Adiktologické kompendium. Grada Publishing, a. s. Praha.

Moore, T., Zammit, S., Lingford-Hughes, A., Barnes, T., Jones, P., Burke, M., & Lewis, G., (2007). Cannabis Use And Risk Of Psychotic Or Affective Mental Health Outcomes: A Systematic Review. The Lancet, 370: 319-328.

Morgan, C., Curran, H., (2008). Effects Of Cannabidiol On Schizophrenia-like Symptoms In People Who Use Cannabis. The British Journal of Psychiatry, 192: 306-307.

Morgan, D. L., (2001). Ohniskové skupiny jako metoda kvalitativního výzkumu. Boskovice: Albert.

Muñoz, J., Soto, S., (2001). El uso terapéutico de cannabis y la creación de establecimientos para su adquisición y consumo, Revista de Derecho Penal y Criminología, 7: 49-94.

Navarrete-Varo, R., (2014). Spain. International Association for Cannabinoid Medicines. Last update March 2014. From <http://www.cannabis-med.org/index.php?tpl=page&id=47&lng=en>

Novotny, M., Lee, M., Bartle, K., (1976). A possible chemical basis for the higher mutagenicity of marijuana smoke as compared to tobacco smoke. Experientia, 32: 280-282.

Os, J., Bak, M., Hanssen, M., Bijl, R., De Graaf, R., Verdoux, H., (2002). Cannabis Use and Psychosis: A Longitudinal Population-based Study. American Journal of Epidemiology, 156 (4): 319-327.

Owen, K., P., Sutter, M., E., Albertson, T., E., (2013). Marijuana: Respiratory Tract Effects. Clinic Rev Allerg Immunol. 2014 Feb;46 (1): 65-81.

Proal, A., Fleming, J., Galvez-Buccollini, J., Delisi, L. (2014). A controlled family study of cannabis users with and without psychosis. Schizophrenia Research, 152: 283–288.

Rhodes, T., (2010). Harm reduction : Evidence, impacts and challenges EMCDDA monographs. Luxembourg: Publications Office.

Rhodes, T., Hedrich, D., (2010). Chapter 1. In Harm reduction: Evidence, impacts and challenges EMCDDA monographs. Luxembourg: Publications Office.

Rickert, W., S., Robinson, J., C., Rogers, B., (1982). A comparison of tar, carbon monoxide and pH levels in smoke from marihuana and tobacco cigarettes. Canadian Journal of Public Health 73: 386–391.

Roffman, R., Stephens, R., (2011). In Marlatt, G. A., Larimer, M. E., Witkiewitz, K. (Eds.). (2011). Harm reduction: Pragmatic strategies for managing high-risk behaviors. Guilford Press.

Roth, M. D., Arora, A., Barsky, S. H., Kleerup, E. C., Simmons, M., Tashkin, D. P. (1998). Airway inflammation in young marijuana and tobacco smokers. American Journal of Respiratory and Critical Care Medicine, 157 (3): 928-937.

Ruman, M., Klvaňová, L., (2008). Konopí staronový přítel člověk., Chraštické ekocentrum, 2008. ISBN 978-80- 254-1825-3. From:  
[http://www.konopa.cz/images/stories/FINALNI\\_Konopi%20staronovy%20pritel.pdf](http://www.konopa.cz/images/stories/FINALNI_Konopi%20staronovy%20pritel.pdf)

Shand, F., Gates, J., Fawcett, J., Mattick, R., (2003). The treatment of alcohol problems: a review of the evidence, Commonwealth Department of Health and Ageing, Canberra.

Schneider, S., Bebing, R., Dauberschmidt, C., (2013). Detection of pesticides in seized illegal cannabis plants. Analytical Methods, 6: 515-520.

Solowij, N., (1998). Cannabis and cognitive functioning, Cambridge University Press, Cambridge, UK.

Sznitman, S., Olsson, B., Room, R. (Eds.), (2008). A cannabis reader: Global issues and local experiences : Perspectives on cannabis controversies, treatment and regulation in Europe. Luxembourg: Office for Official Publications of the European Communities.

UNODC, (1972). Single Convention on Narcotic Drugs, 1961. As amended by the 1972 Protocol amending the Single Convention on Narcotic Drugs, 1961. From  
[http://www.unodc.org/pdf/convention\\_1961\\_en.pdf](http://www.unodc.org/pdf/convention_1961_en.pdf)

UNODC, (2013). The International Drug Control Conventions. United Nations Office on Drugs and Crime. Vienna. From [http://www.unodc.org/documents/commissions/CND/Int\\_Drug\\_Control\\_Conventions/Ebook/The\\_International\\_Drug\\_Control\\_Conventions\\_E.pdf](http://www.unodc.org/documents/commissions/CND/Int_Drug_Control_Conventions/Ebook/The_International_Drug_Control_Conventions_E.pdf)

UNODC, (2014a). Cannabis: Overview. In World Drug Report 2014. Vienna: United Nations Office on Drugs and Crime. 978-92-1-056752-7. From: [http://www.unodc.org/documents/wdr2014/World\\_Drug\\_Report\\_2014\\_web.pdf](http://www.unodc.org/documents/wdr2014/World_Drug_Report_2014_web.pdf)

UNODC, (2014b). Report of the Secretariat on statistical analysis of drug trafficking trends in East, South-East and South Asia, Oceania and worldwide. Thirty-eighth Meeting of Heads of National Drug Law Enforcement Agencies, Asia and the Pacific Bangkok, 21-24 October 2014. From: [http://www.unodc.org/documents/commissions/CND/Subsidiary\\_Bodies/HONLAP/38th\\_Documentation/UNODC\\_HONLAP38\\_2\\_eV1405752.pdf](http://www.unodc.org/documents/commissions/CND/Subsidiary_Bodies/HONLAP/38th_Documentation/UNODC_HONLAP38_2_eV1405752.pdf)

UNODC, (2014c). Cannabis: Overview. Available at: [http://www.unodc.org/documents/wdr2014/Cannabis\\_2014\\_web.pdf](http://www.unodc.org/documents/wdr2014/Cannabis_2014_web.pdf)

Verweij, P., Kerremans, J., Voss, A., Meis, J., (2000). Fungal Contamination of Tobacco and Marijuana. The Journal of the American Medical Association, 284: 2875-2875.

WHO, (2015). Cannabis. Retrieved April 23, 2015. From [http://www.who.int/substance\\_abuse/facts/cannabis/en/](http://www.who.int/substance_abuse/facts/cannabis/en/)

Wodak, A., Reinarman, C., Cohen, P., Drummond, C., (2002). For And Against. Cannabis Control: Costs Outweigh The Benefits. British Medical Journal, 324: 105-108.

Wood, T., Spivey, W. T., & Easterfield, T., (1899). III.—Cannabinol. Part I. Journal of the Chemical Society, Transactions, 75: 20-36.

Wu, T., Tashkin, D., Djahed, B., Rose, J., (1988). Pulmonary Hazards Of Smoking Marijuana As Compared With Tobacco. *New England Journal of Medicine*, 318: 347-351.

Zacny, J. P., Chait, L. D., (1991). Response to marijuana as a function of potency and breathhold duration. *Psychopharmacology*, 103 (2): 223-226.

Zuardi, A., Crippa, J., Hallak, J., Moreira, F., Guimarães, F., (2006). Cannabidiol, A Cannabis Sativa Constituent, As An Antipsychotic Drug. *Brazilian Journal of Medical and Biological Research*, 39: 421-429.